

**CSMP Mathematics
for the
Intermediate Grades
Part I**

Worksheets

What's In This Book?

This book contains all the worksheets you will need for *CSMP for the Intermediate Grades, Part I*. Worksheets are labeled with the same letter and number as the lessons with which they are used. In this book, they are in the following order:

N Worksheets

N1	N10	N25
N2	N11	N26
N3	N13	N27
N4	N14	N28
N6	N17	N29
N7	N19	N30
N8	N20	N33
N9	N21	N34

L Worksheets

L1	L4	L8
L2	L7	

G Worksheets

G1	G6	G10
G3	G7	G11
G4	G8	G12
G5	G9	

P Worksheets

P1	P5	P7
P3	P6	P8
P4		

W Worksheets

W7

Name _____

What number is on the Minicomputer?

$$\begin{array}{|c|c|} \hline \bullet & \bullet \\ \hline \bullet & \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline \bullet & \bullet & \bullet & \bullet \\ \hline \bullet & \bullet & & \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline & \bullet \\ \hline \bullet & \\ \hline \end{array} \begin{array}{|c|c|} \hline \bullet & \\ \hline & \bullet \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline & \\ \hline \bullet & \\ \hline \end{array} \begin{array}{|c|c|} \hline \bullet & \bullet \\ \hline & \bullet \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline \bullet & \\ \hline & \bullet \\ \hline \end{array} \begin{array}{|c|c|} \hline & \bullet \\ \hline \bullet & \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline \bullet & \bullet \\ \hline \bullet & \\ \hline \end{array} \begin{array}{|c|c|} \hline \bullet & \bullet \\ \hline & \bullet \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline & \bullet \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \bullet \\ \hline \bullet & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \bullet \\ \hline & \bullet \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \bullet \\ \hline \end{array} \begin{array}{|c|c|} \hline \bullet & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline \bullet & \bullet \\ \hline \bullet & \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline \bullet & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \bullet \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline \bullet & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \bullet \\ \hline \end{array} = \underline{\quad}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \bullet \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \bullet & \bullet \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline \bullet & \bullet \\ \hline \end{array} \begin{array}{|c|c|} \hline & \bullet & \bullet & \bullet & \bullet \\ \hline & & & & \\ \hline \end{array} = \underline{\quad}$$

Name _____

N1 **

Put each of these numbers on the Minicomputer. You may use positive checkers or negative checkers or both kinds of checkers.

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 16$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 7$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \hat{5}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 40$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 49$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 98$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \hat{76}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 125$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 1015$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 3141$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 10501$$

Name _____

N1 ***

Put each of these numbers on the Minicomputer using exactly three checkers (positive or negative).

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 6$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{14}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 0$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 77$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 194$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{482}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = 8072$$

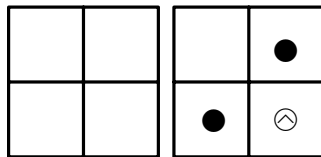
Name _____

N1 *****

Paz is a secret number.

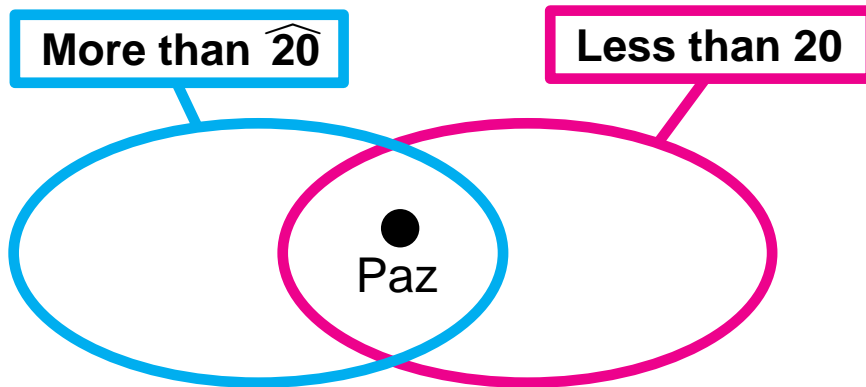
Clue 1

Paz can be shown on this Minicomputer by moving one of these checkers to the tens board.



What numbers could Paz be? _____, _____, _____, _____, _____,
_____, _____, _____, _____, _____, _____, or _____ ?

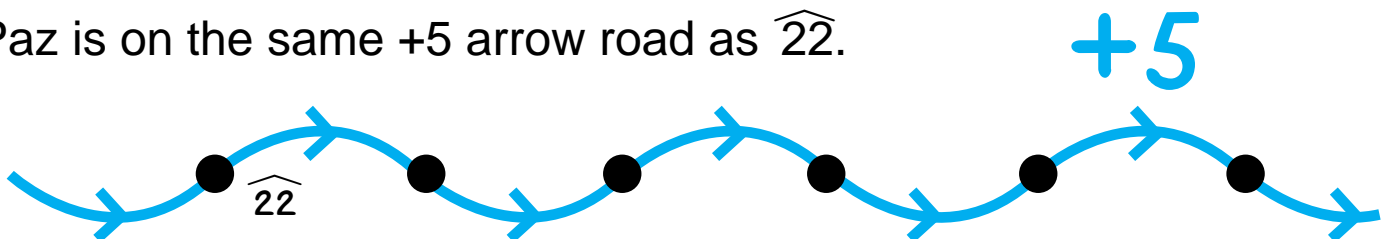
Clue 2



Paz could be? _____, _____, _____, or _____.

Clue 3

Paz is on the same +5 arrow road as $\widehat{22}$.

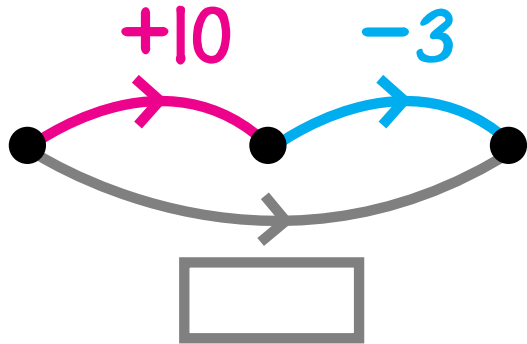


Who is Paz? _____

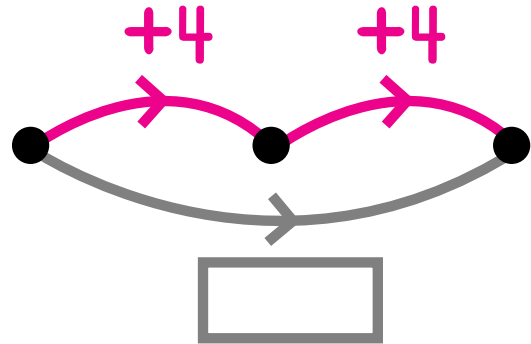
Name _____

N2 *

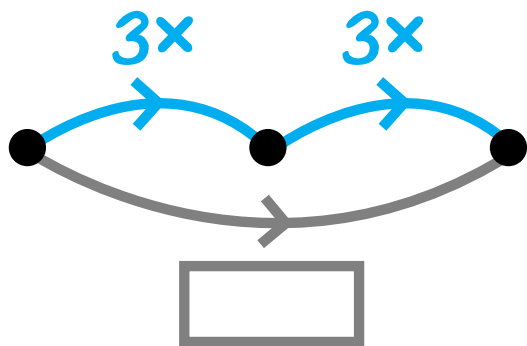
Fill in the charts and label the gray arrows.



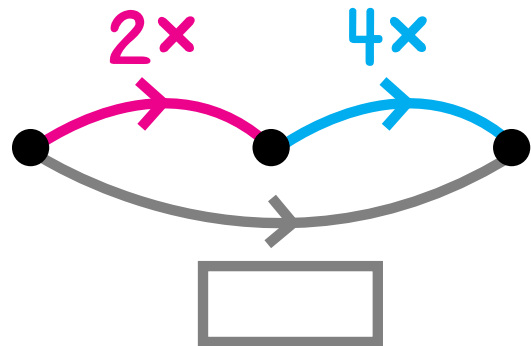
Starting Number	Ending Number
5	



Starting Number	Ending Number
22	



Starting Number	Ending Number
1	
5	

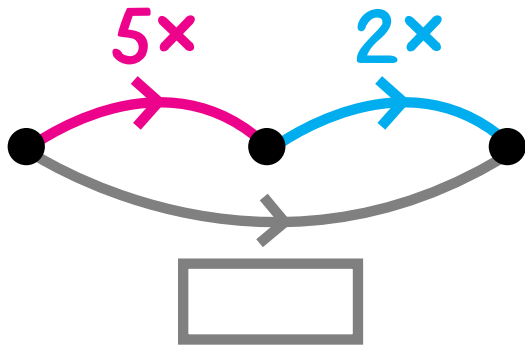


Starting Number	Ending Number
10	
3	

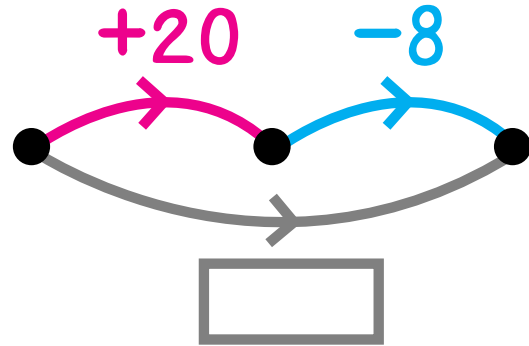
Name _____

N2 **

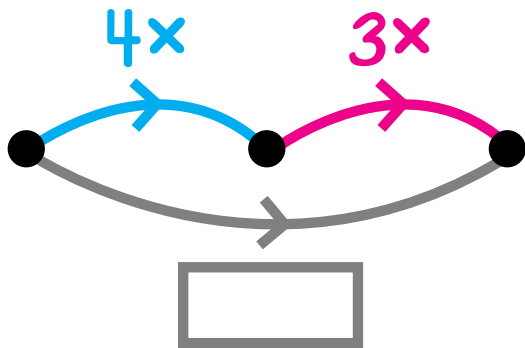
Fill in the charts and label the gray arrows.



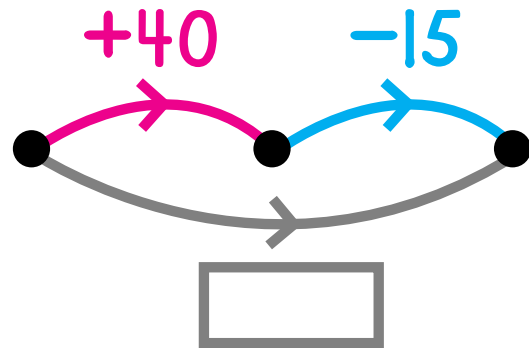
Starting Number	Ending Number
	90



Starting Number	Ending Number
	192



Starting Number	Ending Number
3	



Starting Number	Ending Number
60	
	48

Name _____

N3(a)

Chicago to Belleville

What is the shortest route from Chicago to Belleville?

Show your work in this box.

Name _____

N3(b)

Closer to Springfield—Chicago or Marion

Which city is closer to Springfield, Chicago or Marion?

Show your work in this box.

Name _____

Fill in the boxes with whole numbers, a different number in each box.

$$74 - \boxed{} = 20$$

$74 - \boxed{} < 20$	$74 - \boxed{} > 20$
$74 - \boxed{} < 20$	$74 - \boxed{} > 20$
$74 - \boxed{} < 20$	$74 - \boxed{} > 20$
$74 - \boxed{} < 20$	$74 - \boxed{} > 20$
$74 - \boxed{} < 20$	$74 - \boxed{} > 20$

Explain any rule or pattern you used to fill in the boxes.

Fill in the boxes with whole numbers, a different number in each box.

$$146 - \boxed{} = 100$$

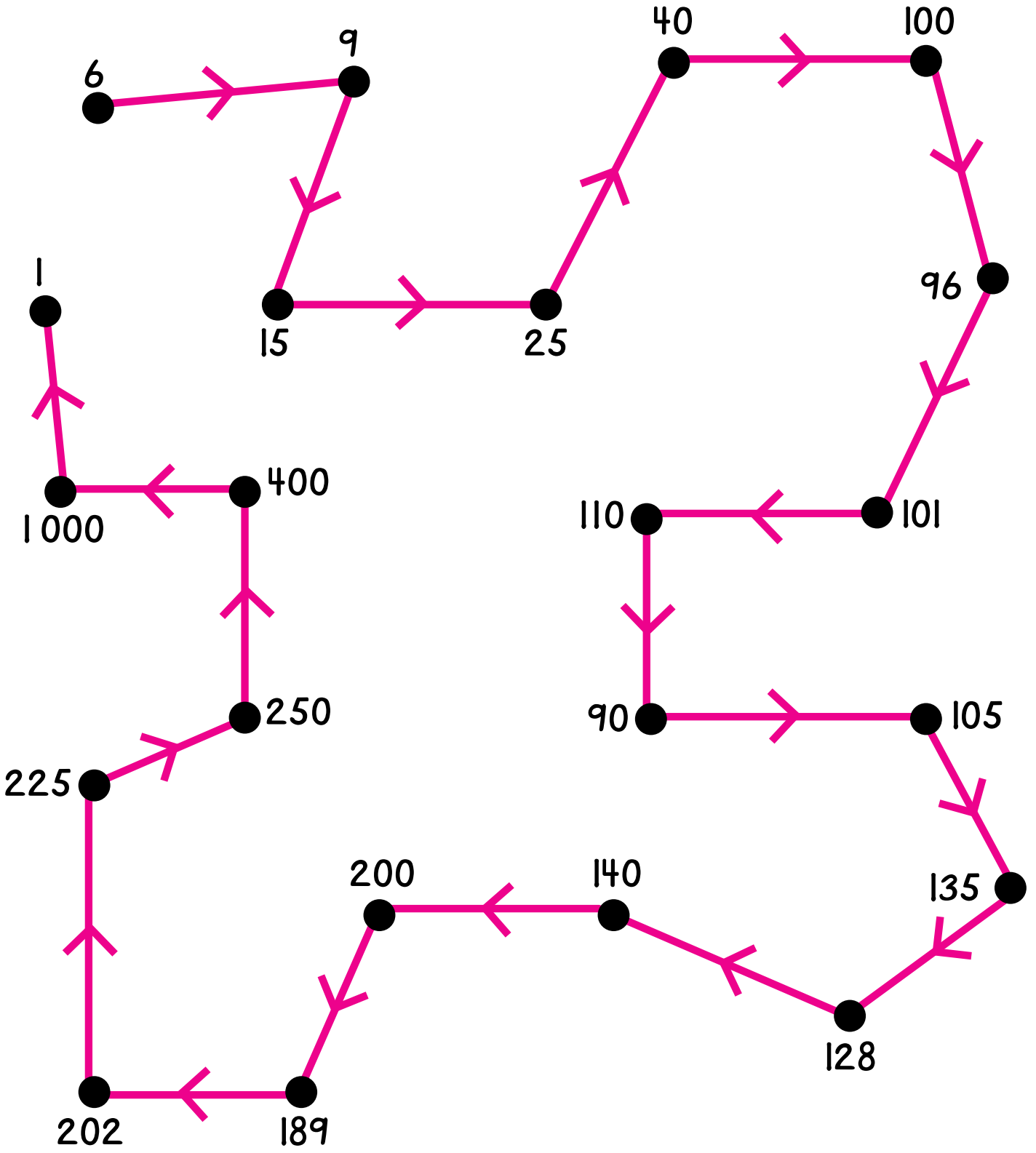
$146 - \boxed{} < 100$	$146 - \boxed{} > 100$
$146 - \boxed{} < 100$	$146 - \boxed{} > 100$
$146 - \boxed{} < 100$	$146 - \boxed{} > 100$
$146 - \boxed{} < 100$	$146 - \boxed{} > 100$
$146 - \boxed{} < 100$	$146 - \boxed{} > 100$

Explain any rule or pattern you used to fill in the boxes.

Name _____

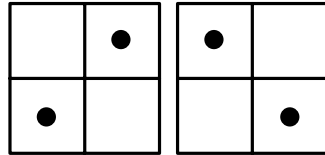
N4 **

Label each arrow + or - some whole number.

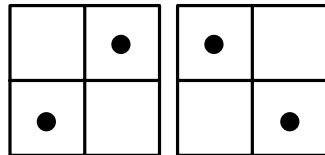


Name _____

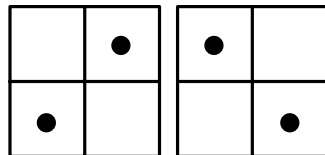
Move exactly one checker to get 72 on the Minicomputer.



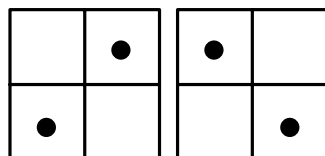
Move exactly one checker to get 59 on the Minicomputer.



Move exactly one checker to get 78 on the Minicomputer.

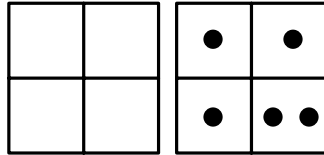


Move exactly one checker to get 39 on the Minicomputer.

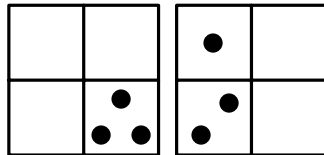


Name _____

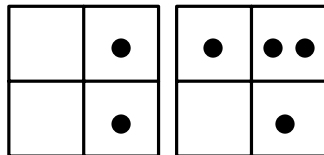
Move exactly one checker to get 25 on the Minicomputer.



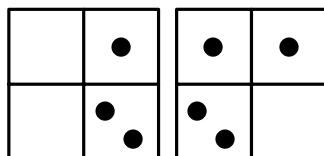
Move exactly one checker to get 35 on the Minicomputer.



Move exactly one checker to get 69 on the Minicomputer.



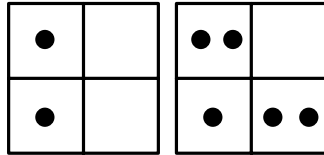
Move exactly one checker to get 73 on the Minicomputer.



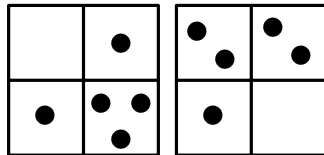
Name _____

N6 ***

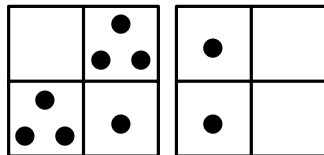
Move exactly two checkers to get 125 on the Minicomputer.



Move exactly two checkers to get 105 on the Minicomputer.



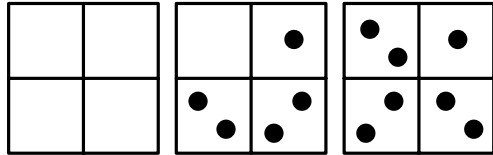
Move exactly two checkers to get 169 on the Minicomputer.



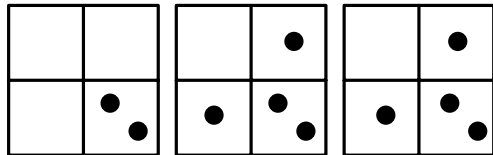
Name _____

N6 *****

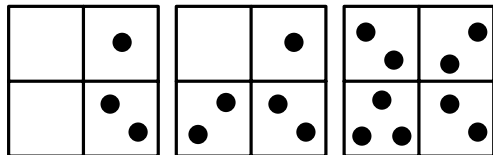
Move at most three checkers to get 490 on the Minicomputer.



Move at most three two checkers to get 468 on the Minicomputer.



Move at most three checkers to get 1015 on the Minicomputer.



Name _____

N7

*

Label each blue arrow with one of these tags.

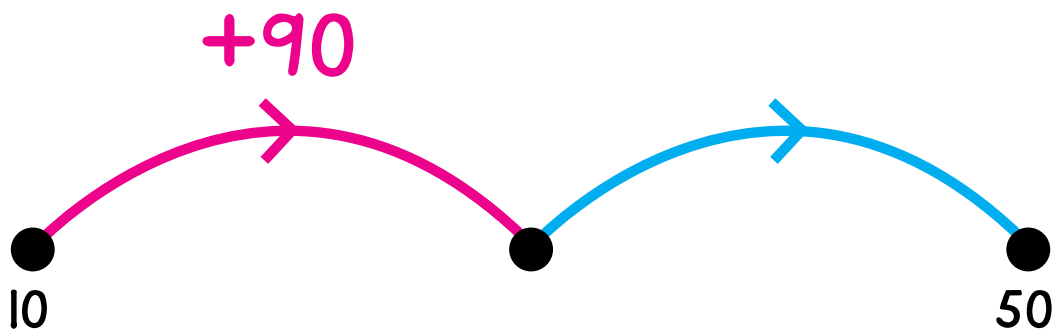
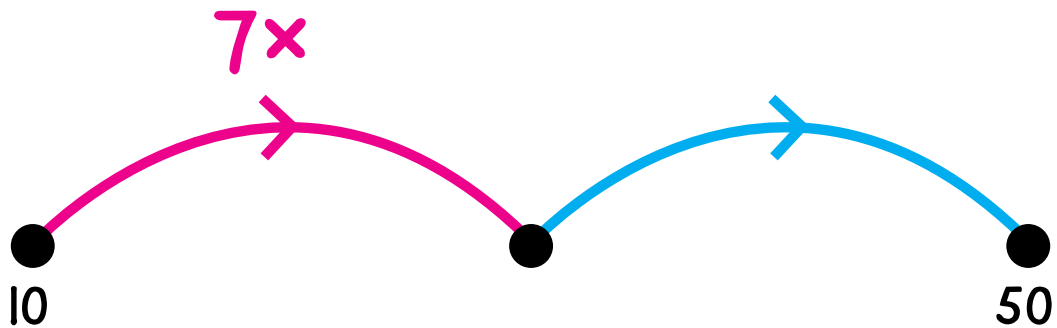
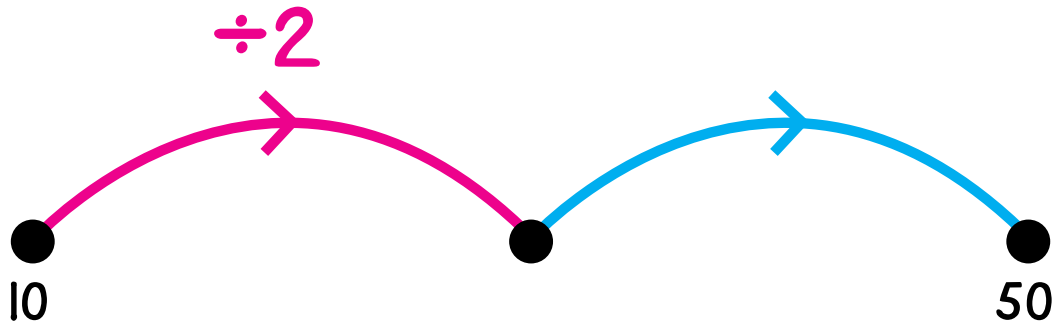
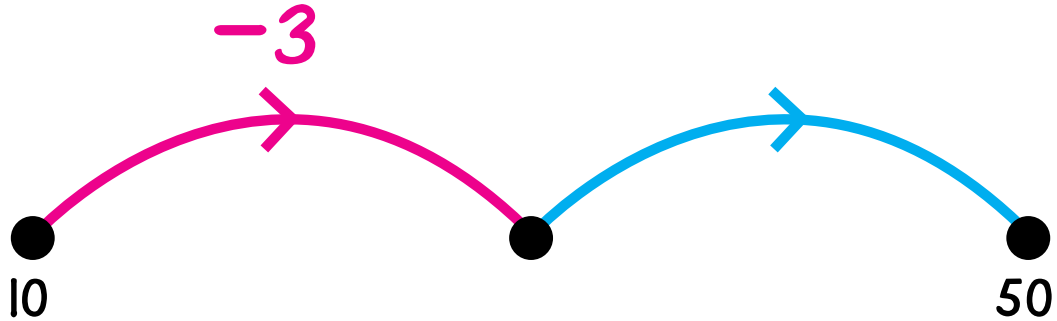
$\div 2$

$10\times$

-20

$+43$

$2\times$



Name _____

N7

**

Label each red arrow with one of these tags.

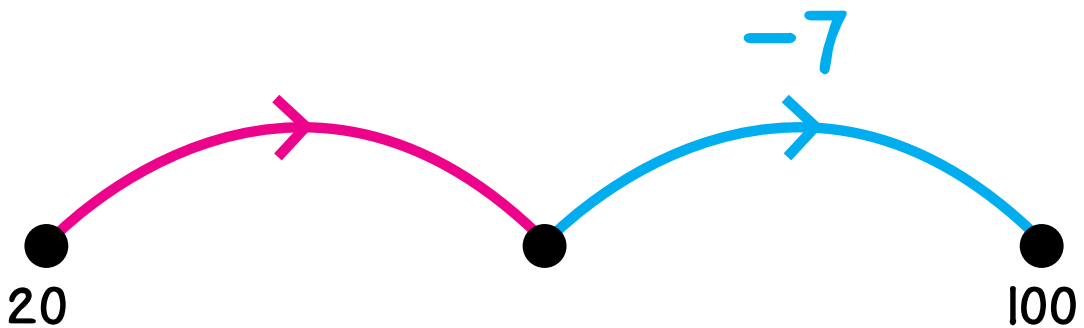
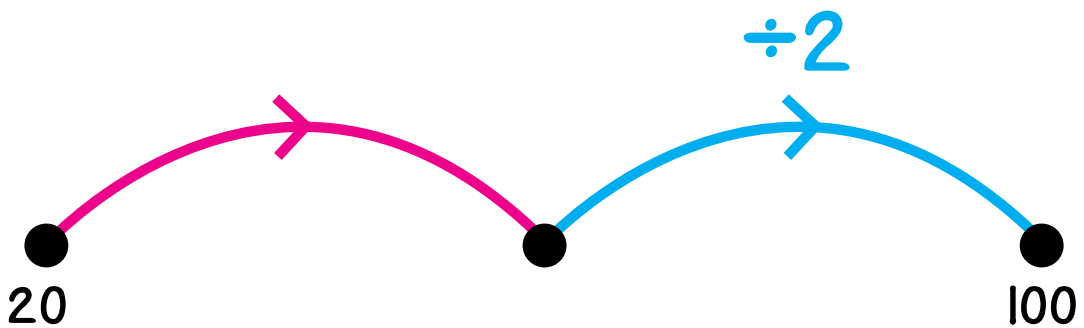
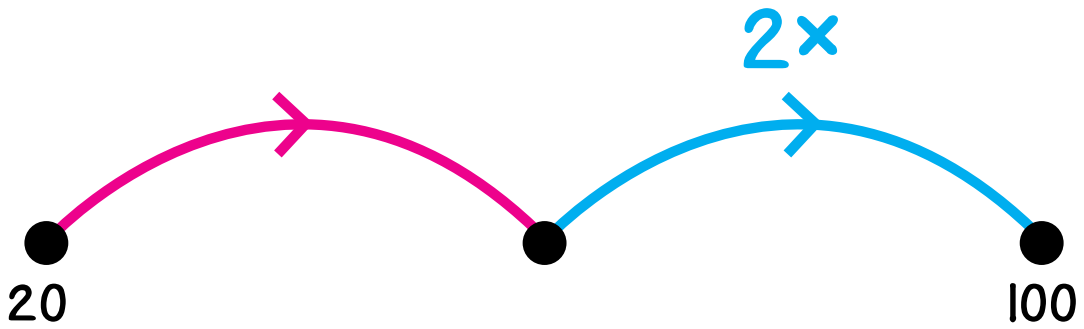
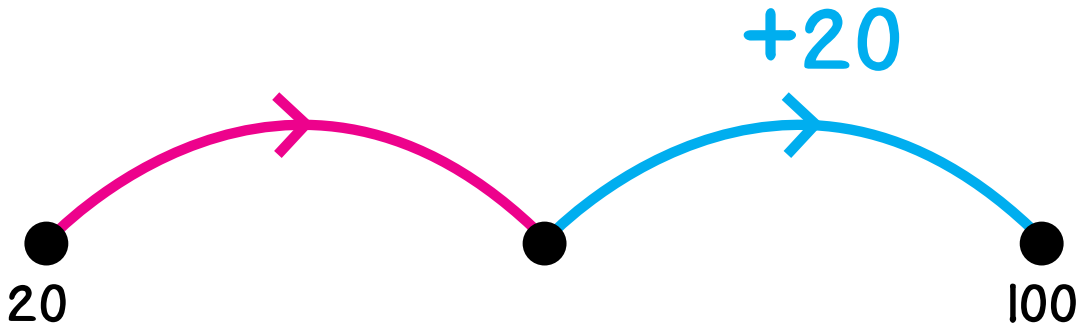
+87

4×

+30

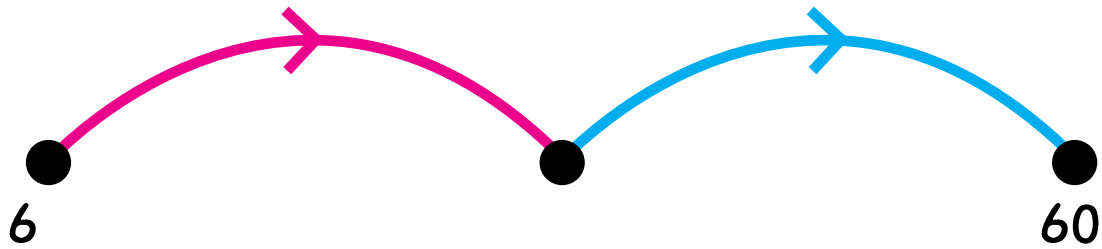
10×

÷4



Name _____

N7 ***



Match the tags.

$2 \times$

$+58$

$+4$

$\div 2$

$\div 3$

$+62$

-8

$5 \times$

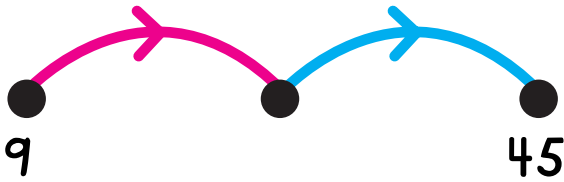
$+114$



$6 \times$

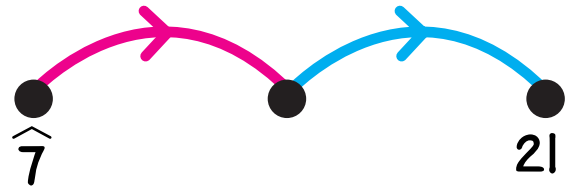
Name _____



N7 *****

Complete the charts.



	
$+4$	
	$\div 2$
$\div 9$	
	$3\times$
$\div 2$	



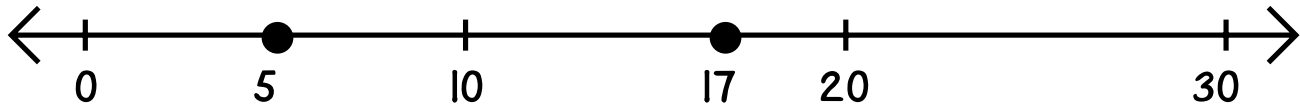
	
$+8$	
	-10
$+49$	
	$3\times$
$+14$	
	$+5$

Name _____

N8 *

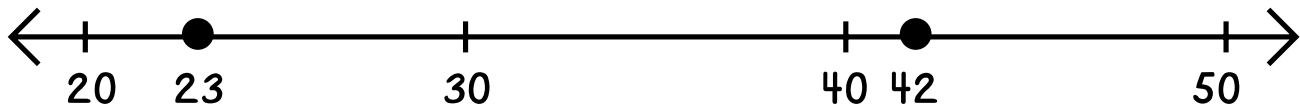
Which is greater, 17 or 5? _____

How much greater? _____



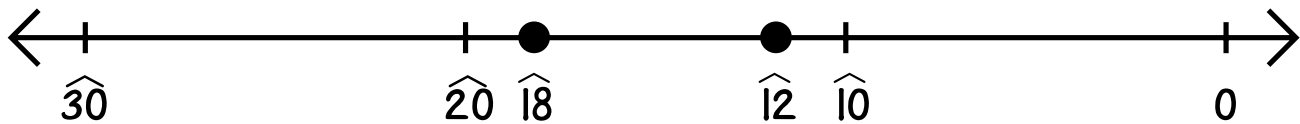
Which is less, 23 or 42? _____

How much less? _____



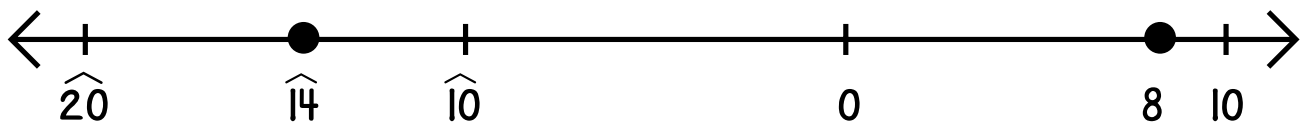
Which is greater, $\widehat{18}$ or $\widehat{12}$? _____

How much greater? _____



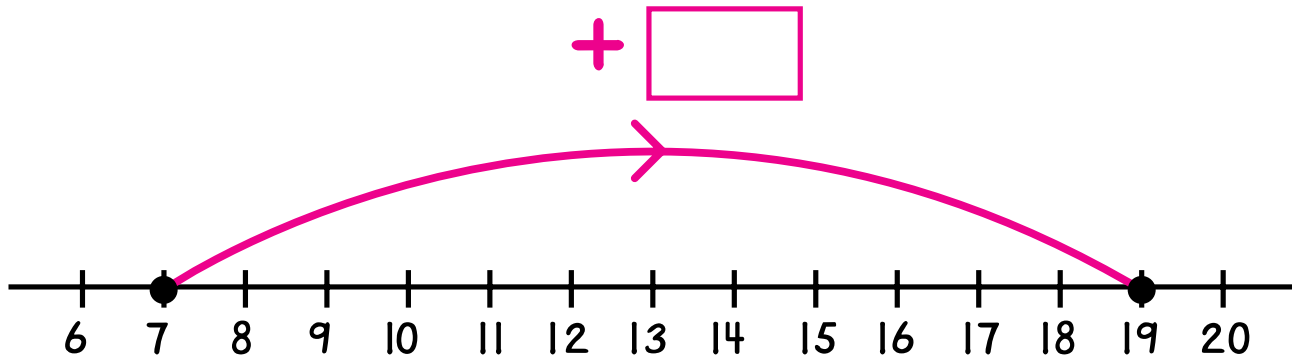
Which is less, $\widehat{14}$ or 8? _____

How much less? _____

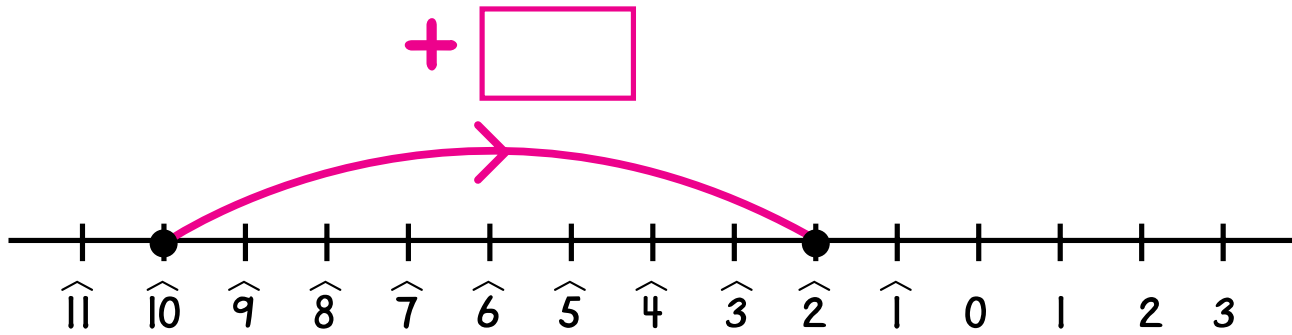


Name _____

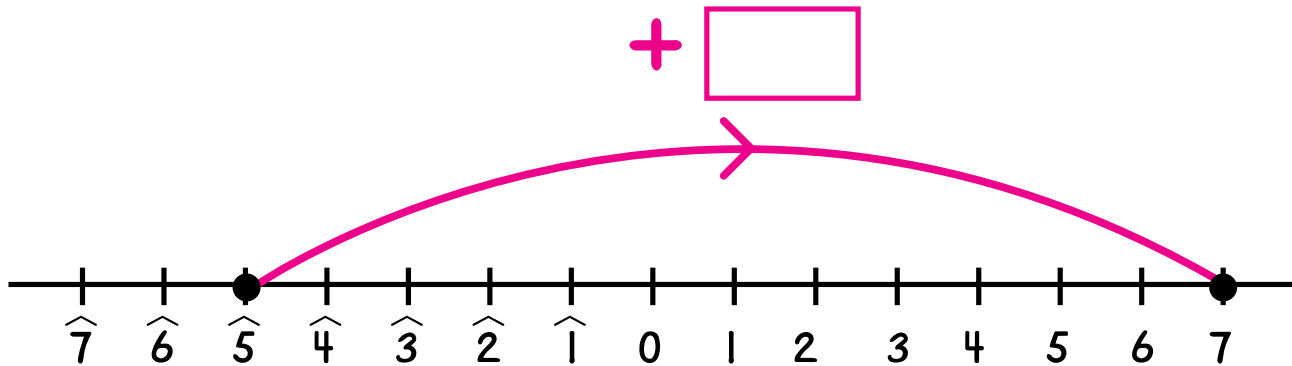
Fill in the boxes for the arrows and answer the questions.



What number is halfway between 7 and 19 on the number line? _____



What number is halfway between $\widehat{10}$ and $\widehat{2}$ on the number line? _____

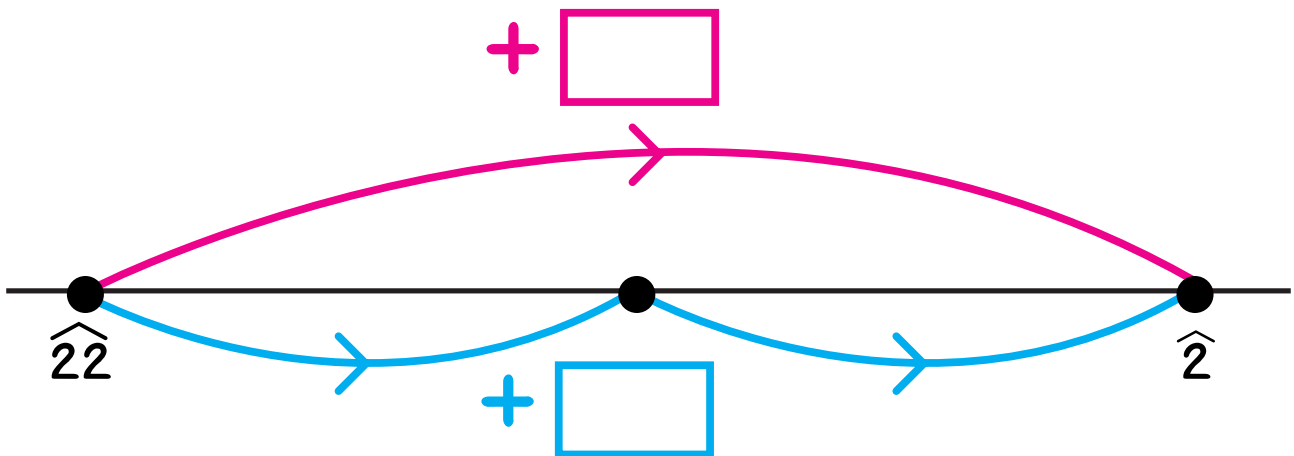
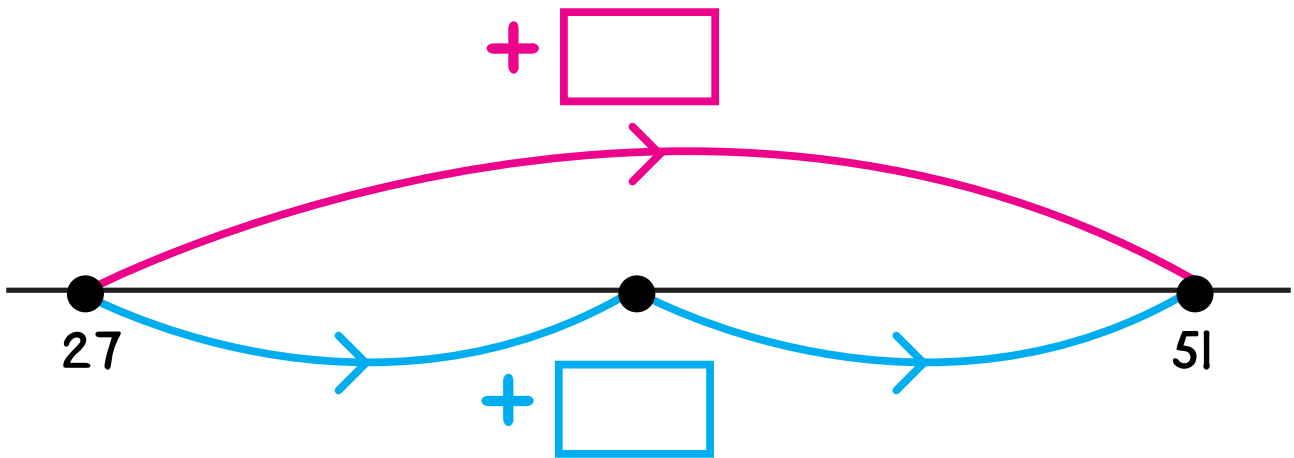
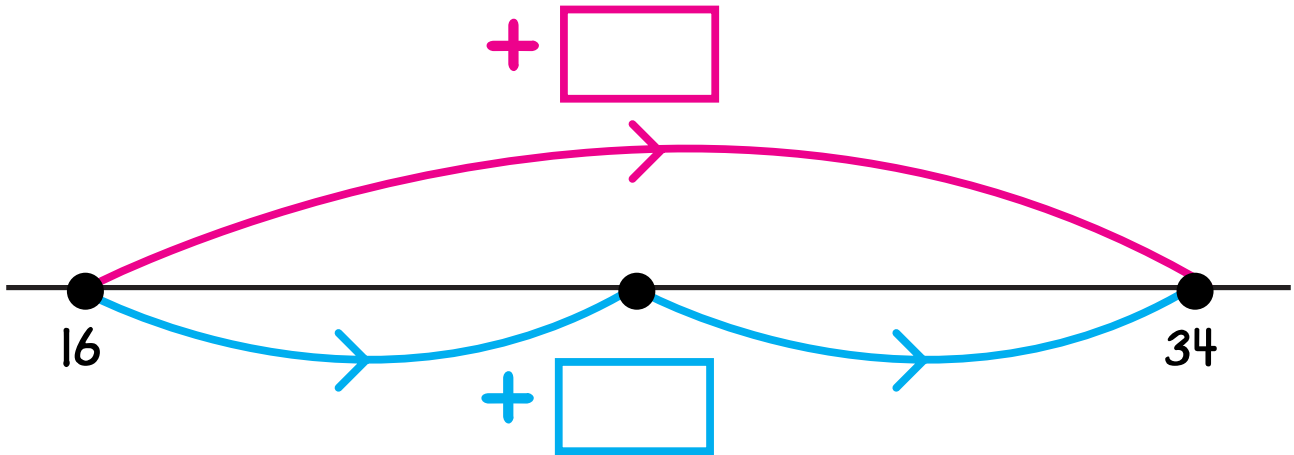


What number is halfway between $\widehat{5}$ and 7 on the number line? _____

Name _____

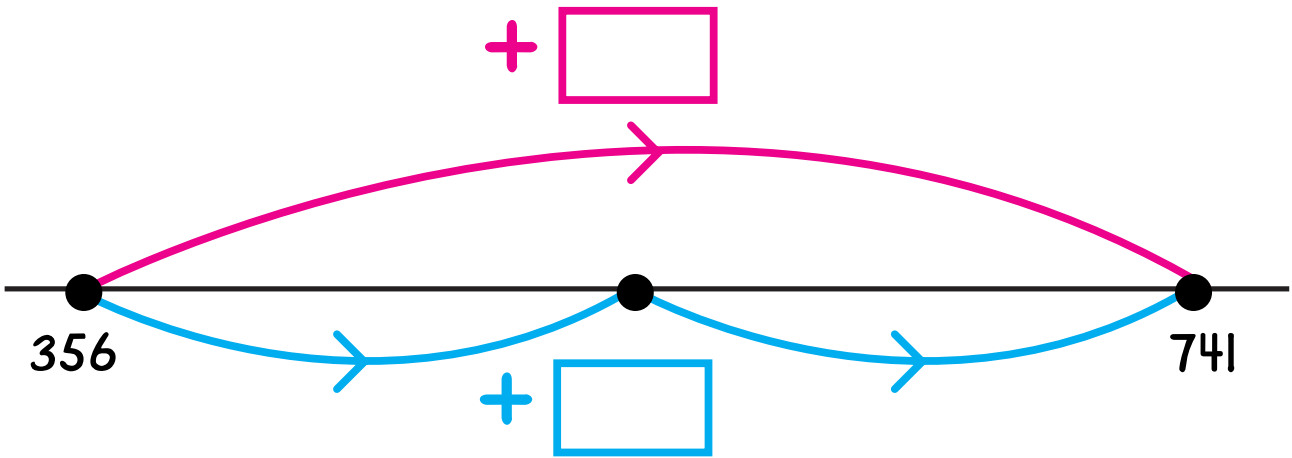
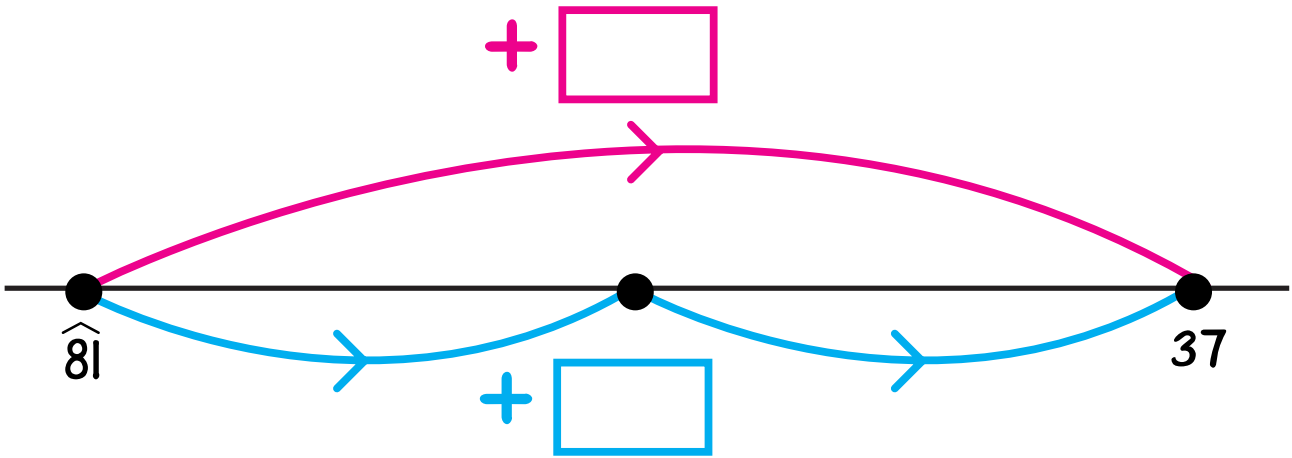
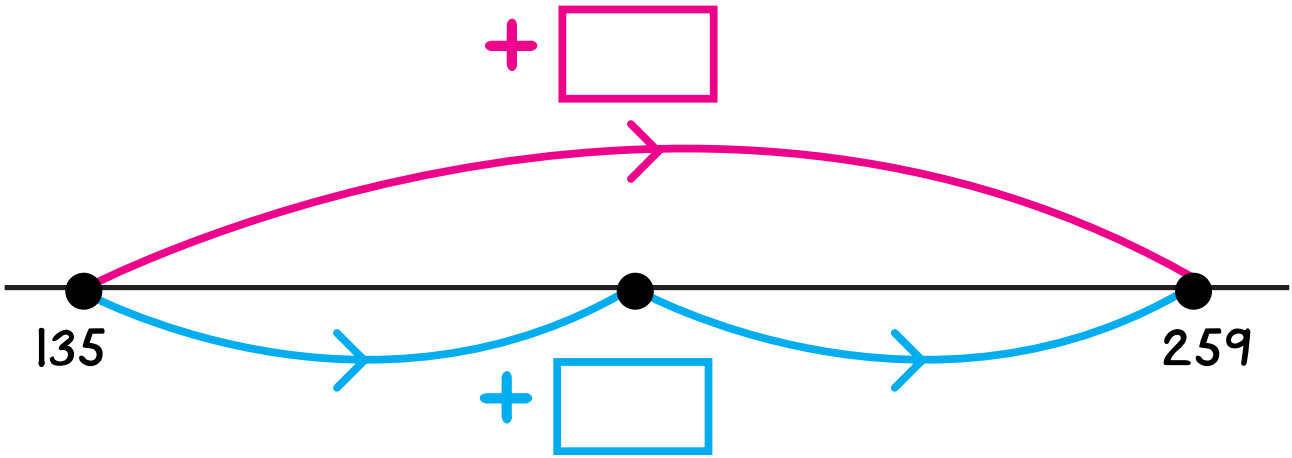
N8 ***

On each number line, label the middle dot with the number halfway between the two given numbers. Fill in the boxes for the arrows.



Name _____

On each number line, label the middle dot with the number halfway between the two given numbers. Fill in the boxes for the arrows.



Name _____

What number is on the Minicomputer?

		●	●

 = _____

		10	

 = _____

●	●		

 = _____

10			

 = _____

		●	●

 = _____

		10	
10			10

 = _____

●	●		

 = _____

	10		10
		10	

 = _____

			10

 = _____

		10	10
		10	10

 = _____

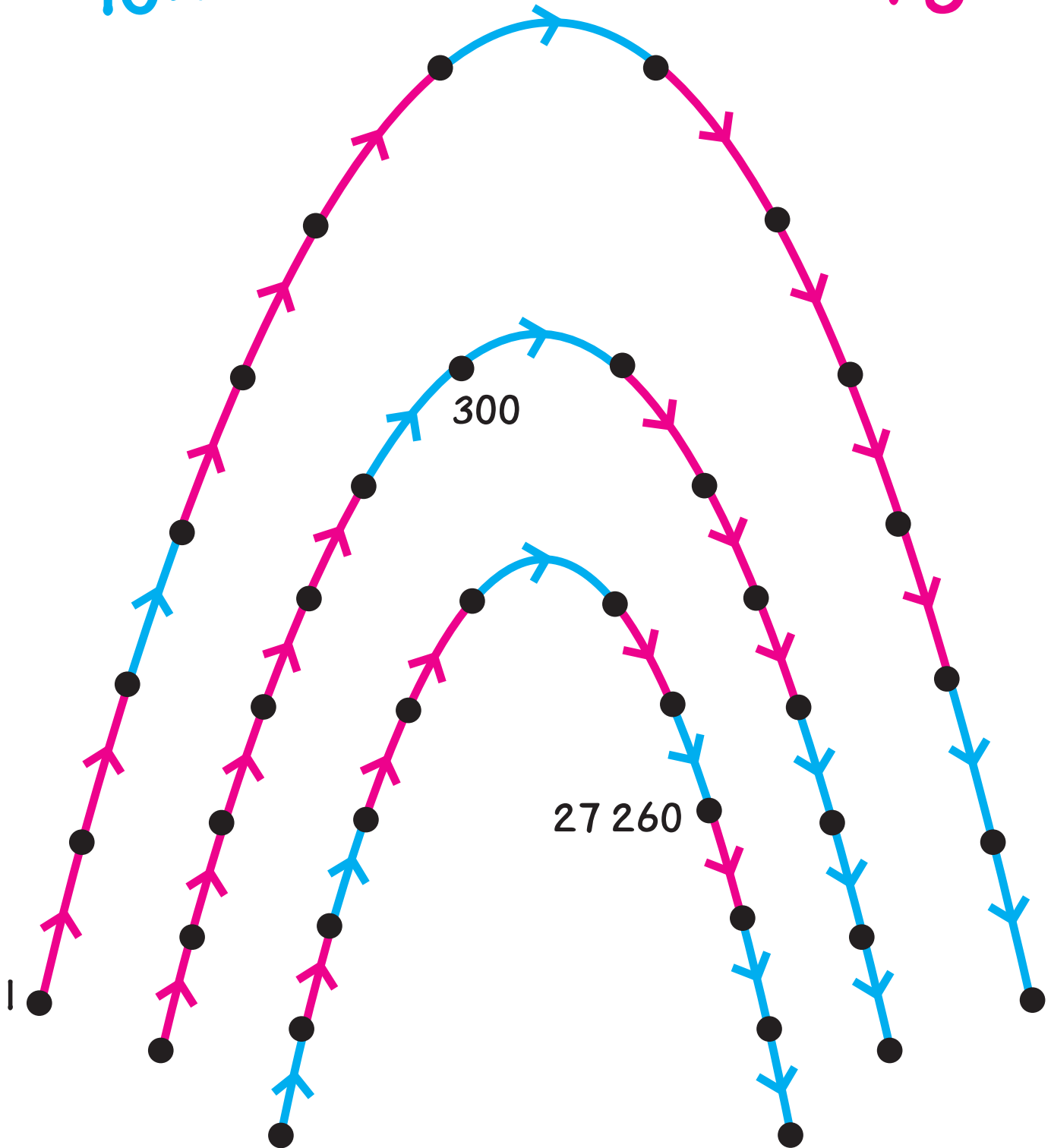
Name _____

N9 **

Label the dots.

10×

+6

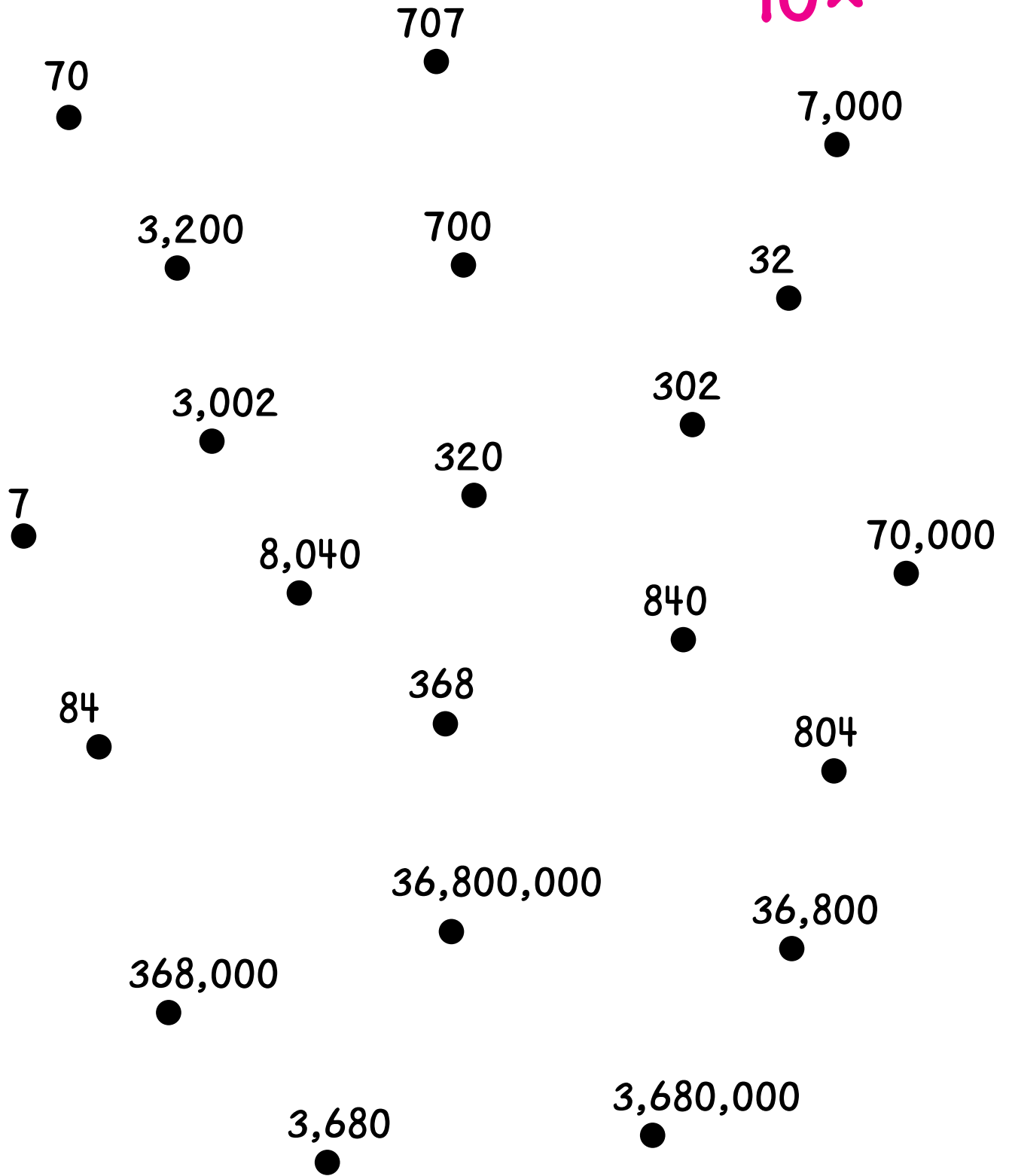


Name _____

N9 ***

Draw as many 10x arrows as possible in this picture.

10x

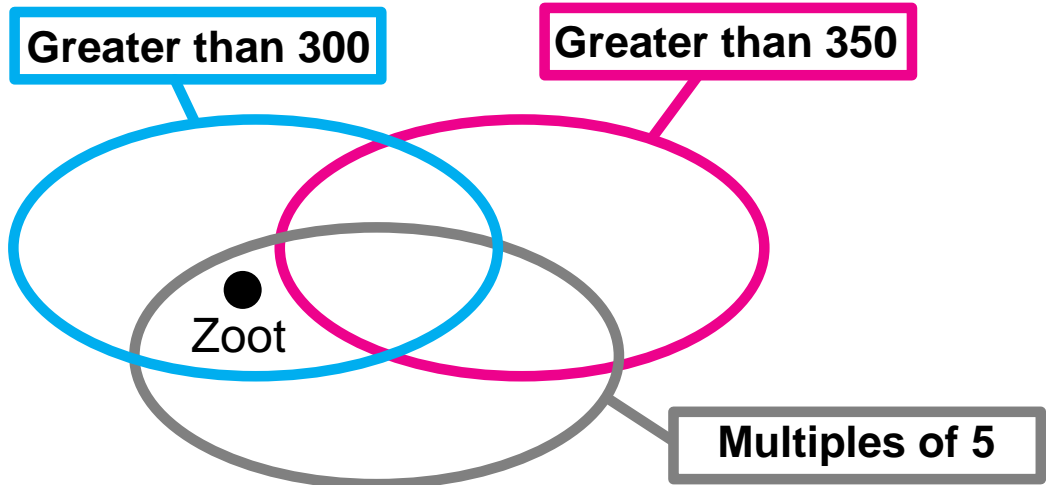


Name _____

N9 * * * *

Zoot is a secret number.

Clue 1



Zoot could be _____, _____, _____, _____, _____, _____,
_____, _____, or _____.

Clue 2

Zoot is the ending number of an arrow road that starts at 0 and has exactly two 10x arrows and ten +1 arrows.

10x +1

● Zoot

0 ●

Who is Zoot? _____

Name _____

N10	*
-----	---

Subtract:

$$\begin{array}{r} 631 \\ -127 \\ \hline \end{array}$$

$$\begin{array}{r} 218 \\ -85 \\ \hline \end{array}$$

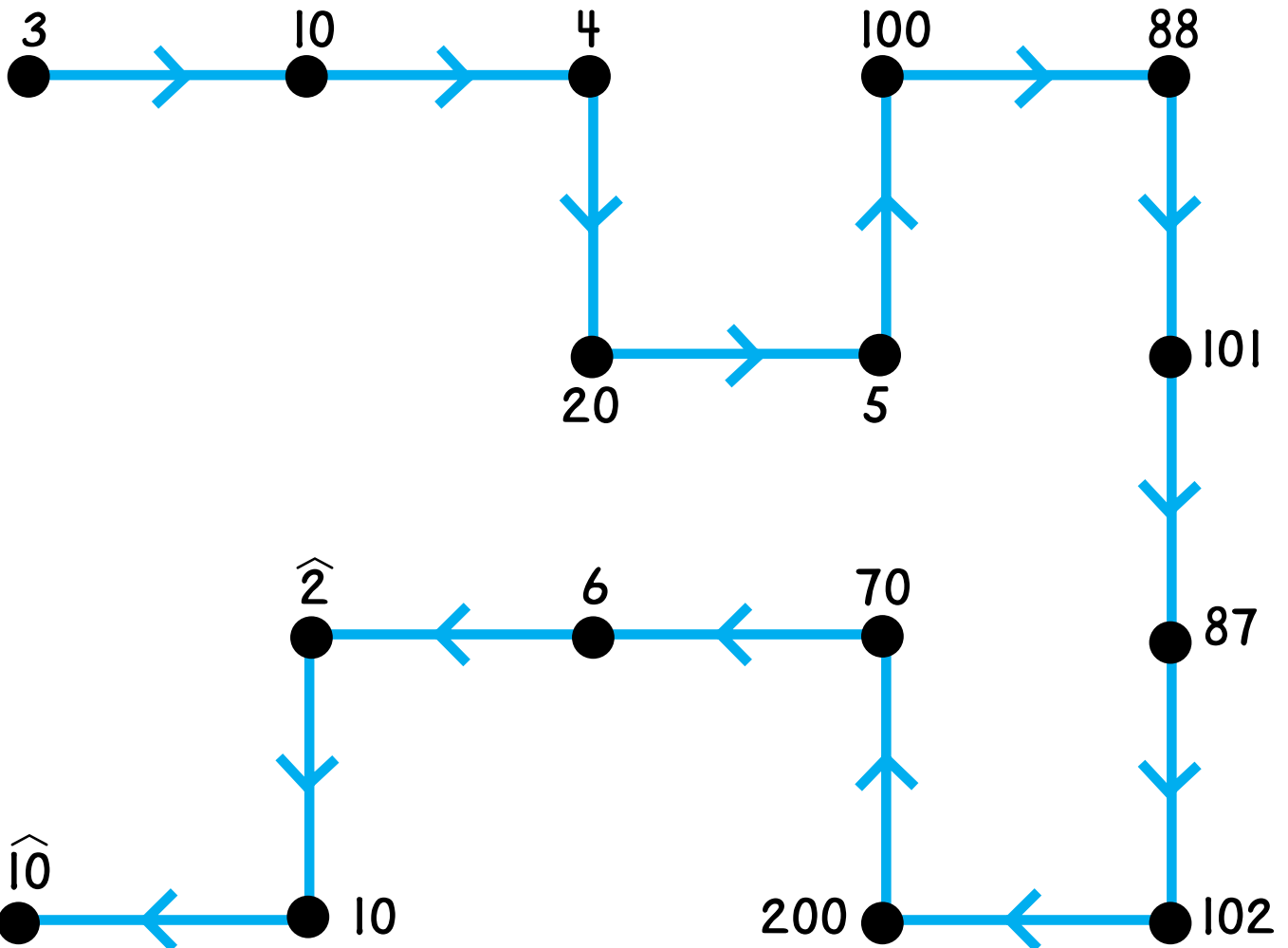
$$\begin{array}{r} 124 \\ -76 \\ \hline \end{array}$$

$$\begin{array}{r} 317 \\ -152 \\ \hline \end{array}$$

$$\begin{array}{r} 503 \\ -248 \\ \hline \end{array}$$

$$\begin{array}{r} 712 \\ -494 \\ \hline \end{array}$$

Label each arrow + or - some whole number.



Name _____

N10

**

Fill in the boxes.

$$55 - 32 = \square$$

$$51 - \square = 23$$

$$\square - 34 = 23$$

$$31 - \square = 23$$

$$\square - 38 = 23$$

$$101 - \square = 23$$

Write two more subtraction problems with 23 as the difference.

Name _____

N10 ***

Put each of these numbers on the Minicomputer using exactly one positive checker and two negative checkers.

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{7}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{15}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{13}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{27}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{36}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{74}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{77}$$

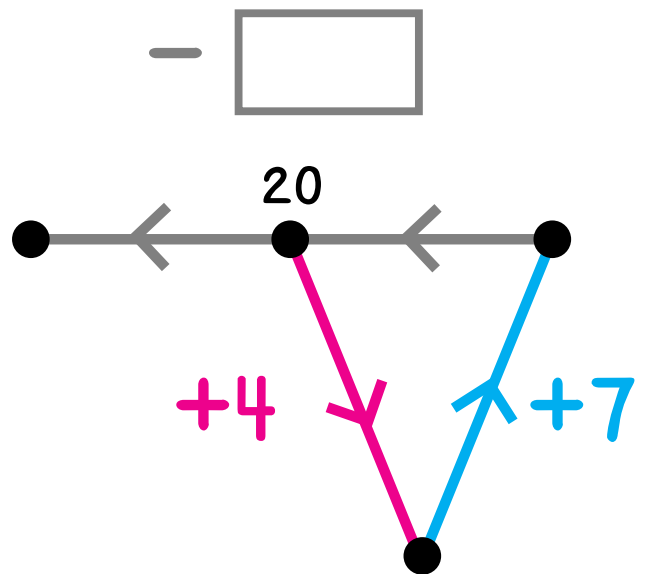
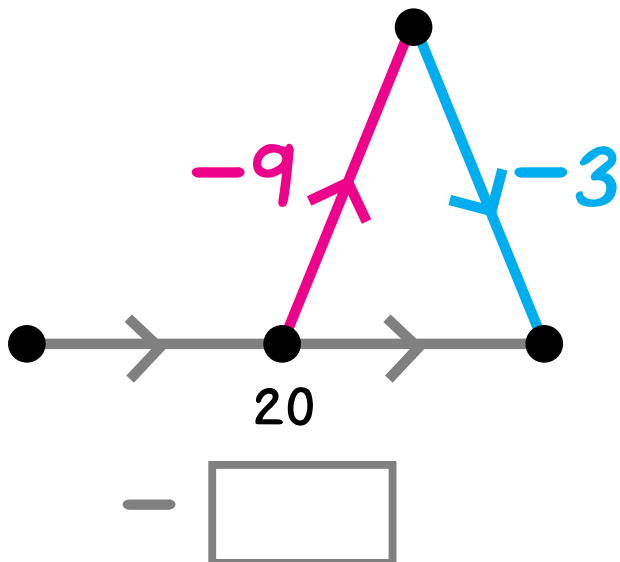
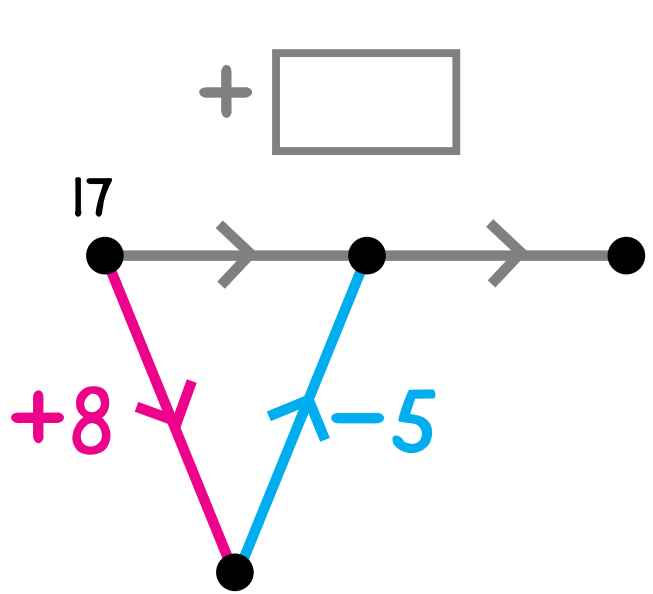
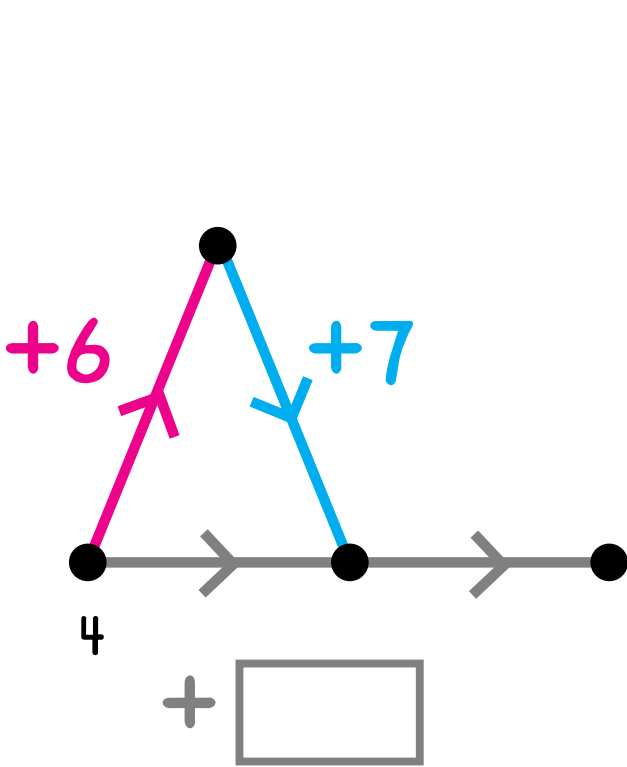
$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{152}$$

$$\begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline \end{array} = \widehat{788}$$

Name _____

N11 *

In each picture, fill in the box for the gray arrows and then label the dots.



Name _____

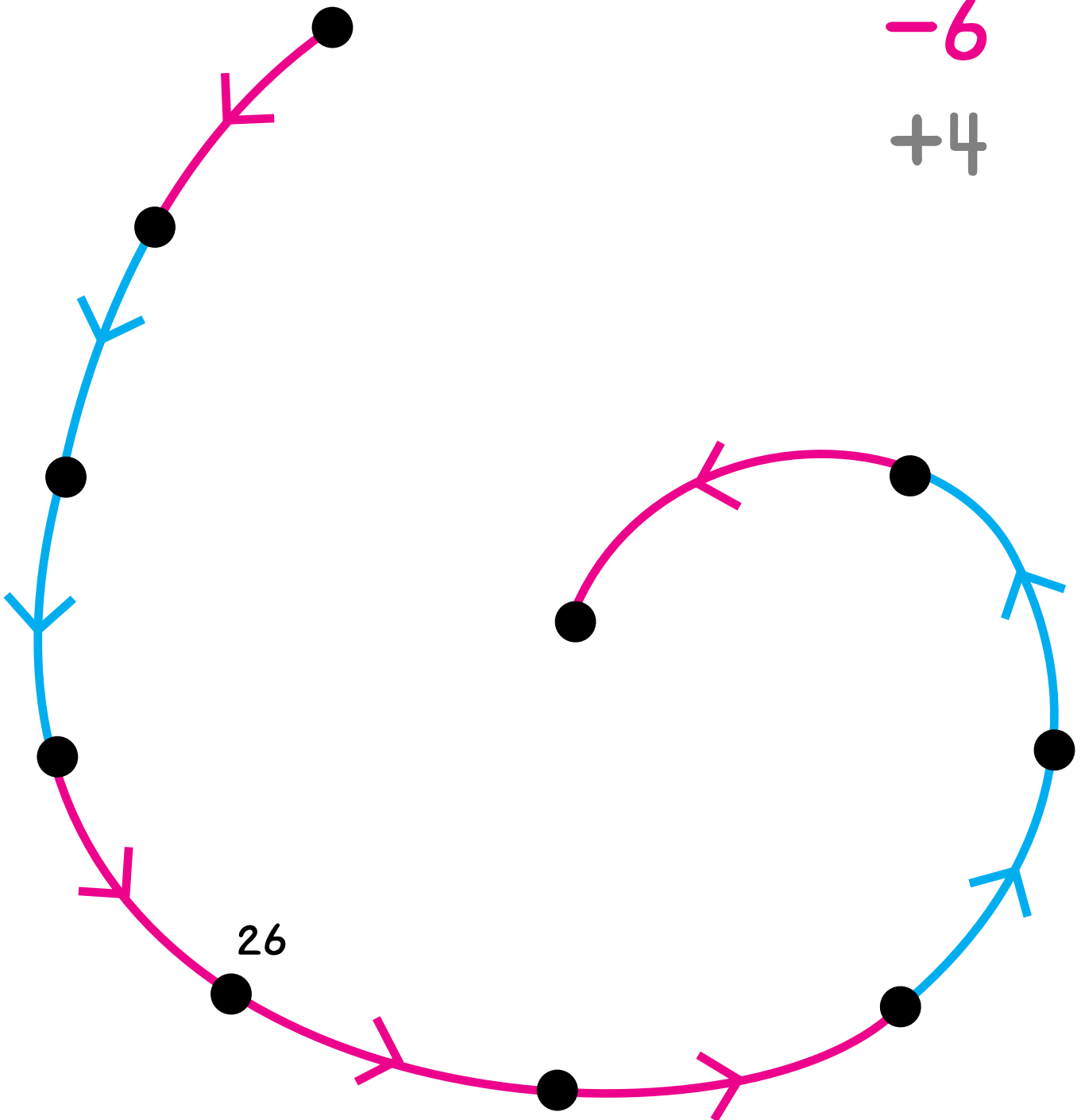
N11 **

Label the dots and draw as many +4 arrows as possible in this picture.

+10

-6

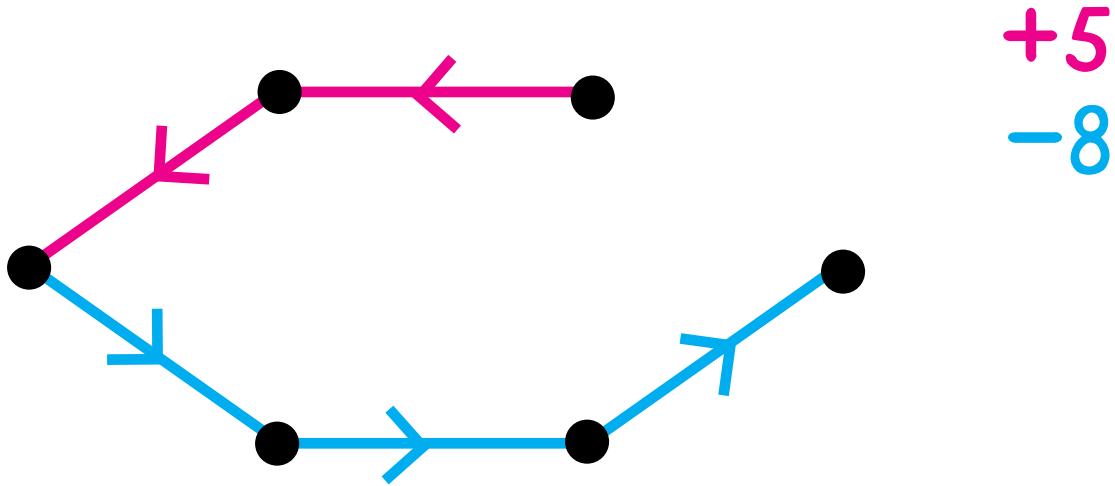
+4



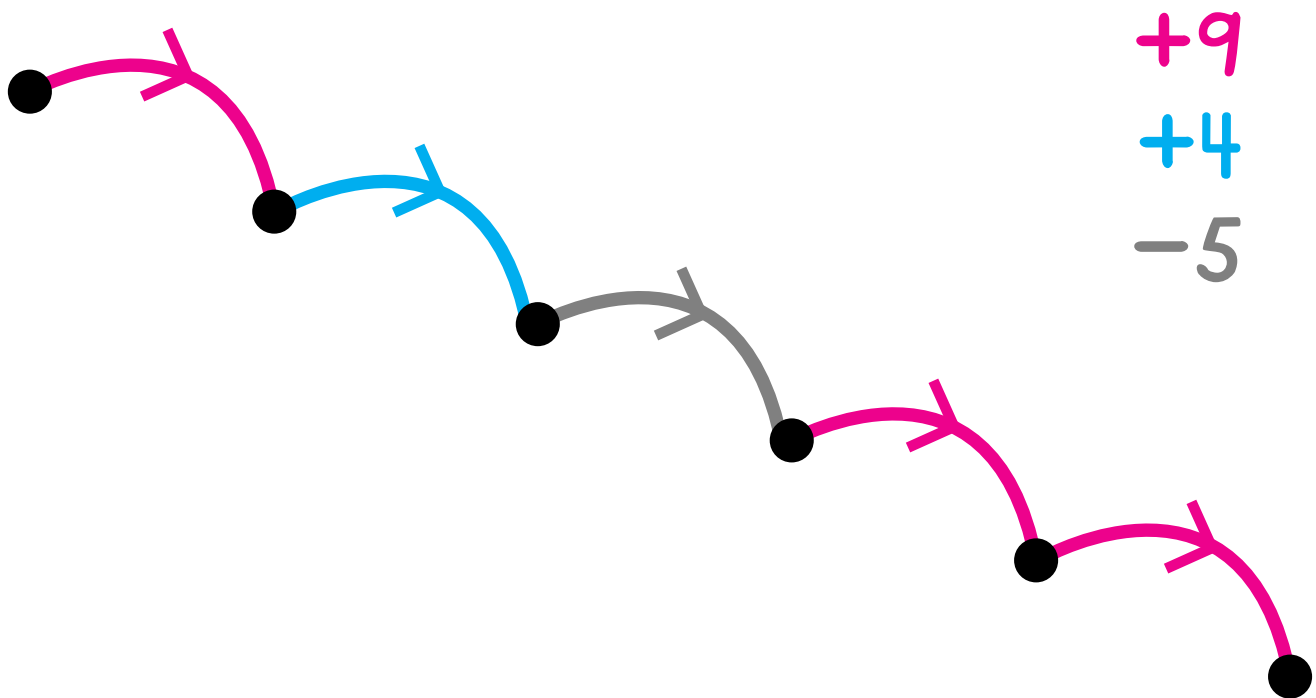
Name _____

N11 ***

7 and 4 are in this arrow picture. Find their dots and label them.



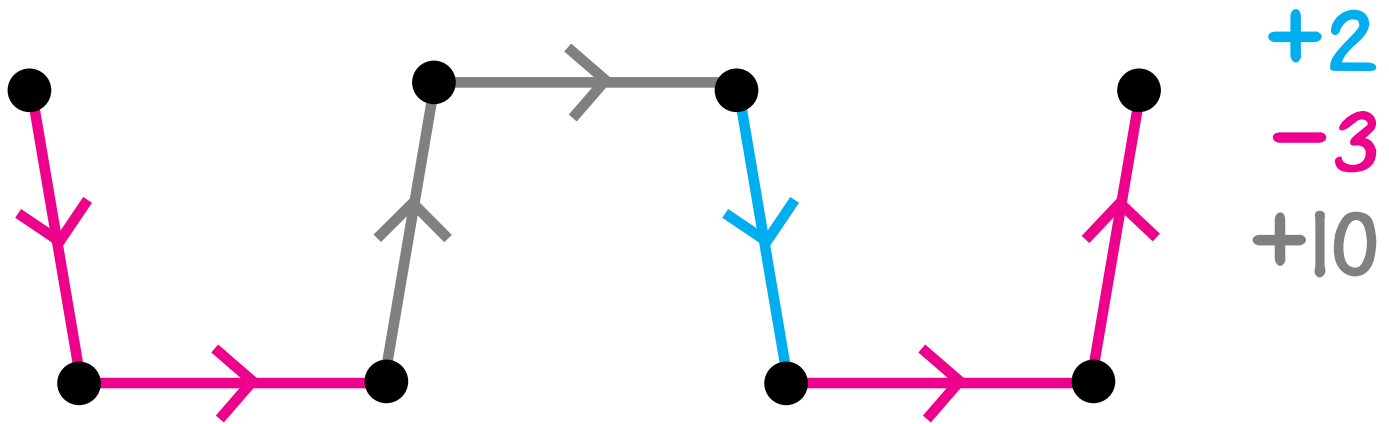
9 and 27 are in this arrow picture. Find their dots and label them.



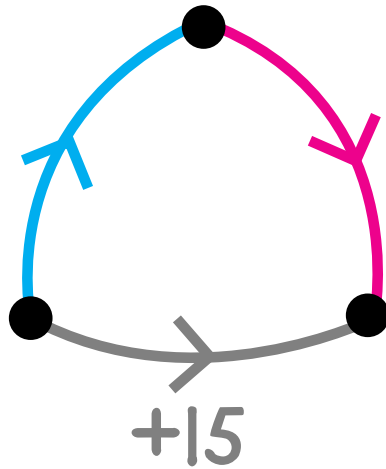
Name _____

N11 * * * *

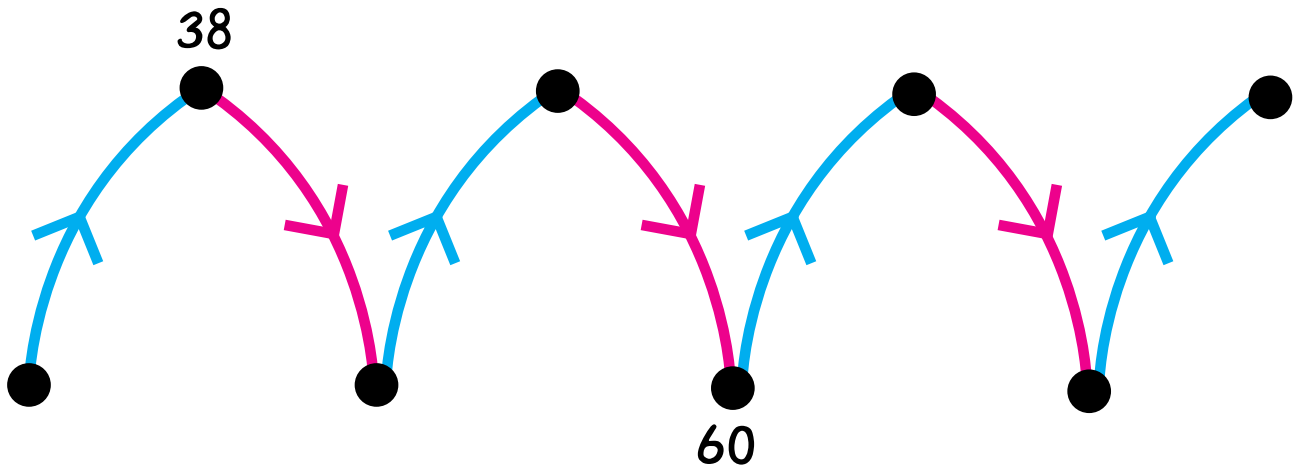
30 and 39 are in this picture. Find their dots and label them.



Using this information,

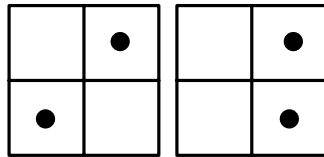


draw the missing gray arrows and label the dots in the picture below.

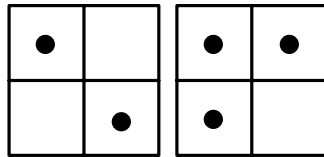


Name _____

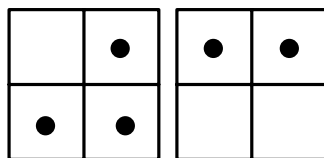
Move exactly one checker to get 47 on the Minicomputer.



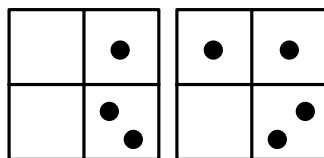
Move exactly one checker to get 103 on the Minicomputer.



Move exactly one checker to get 75 on the Minicomputer.



Move exactly one checker to get 76 on the Minicomputer.

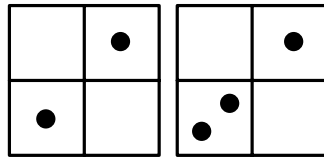


Name _____

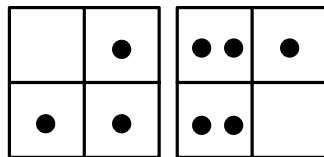
N13

**

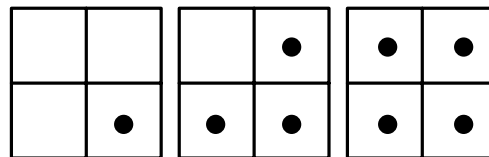
Move exactly one checker to get 84 on the Minicomputer.



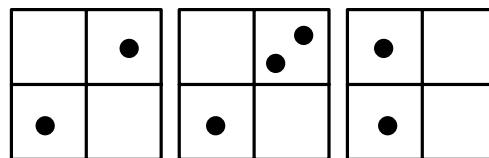
Move exactly one checker to get 64 on the Minicomputer.



Move exactly one checker to get 217 on the Minicomputer.



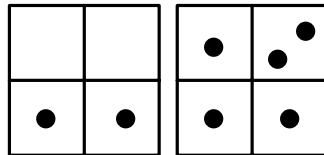
Move exactly one checker to get 590 on the Minicomputer.



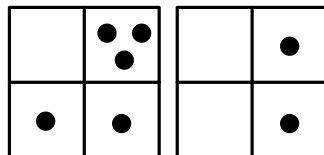
Name _____

N13

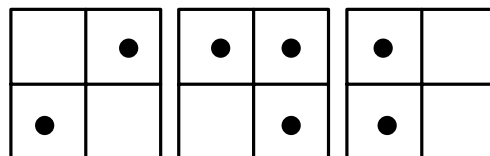
Move exactly two checkers to get 54 on the Minicomputer.



Move exactly two checkers to get 172 on the Minicomputer.



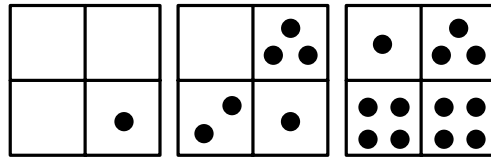
Move exactly two checkers to get 870 on the Minicomputer.



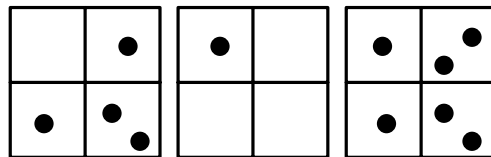
Name _____

N13 *****

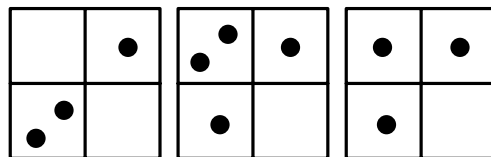
Move at most three checkers to get 680 on the Minicomputer.



Move at most three checkers to get 620 on the Minicomputer.



Move at most three checkers to get 751 on the Minicomputer.



Name _____

N14

*

Fill in the boxes.

$$3 \times \square = 21$$

$$3 \times \square = 30$$

$$3 \times \square = 24$$

$$3 \times \square = 27$$

$$3 \times \square = 45$$

$$3 \times \square = 54$$

$$3 \times \square = 48$$

$$3 \times \square = 42$$

$$3 \times \square = 480$$

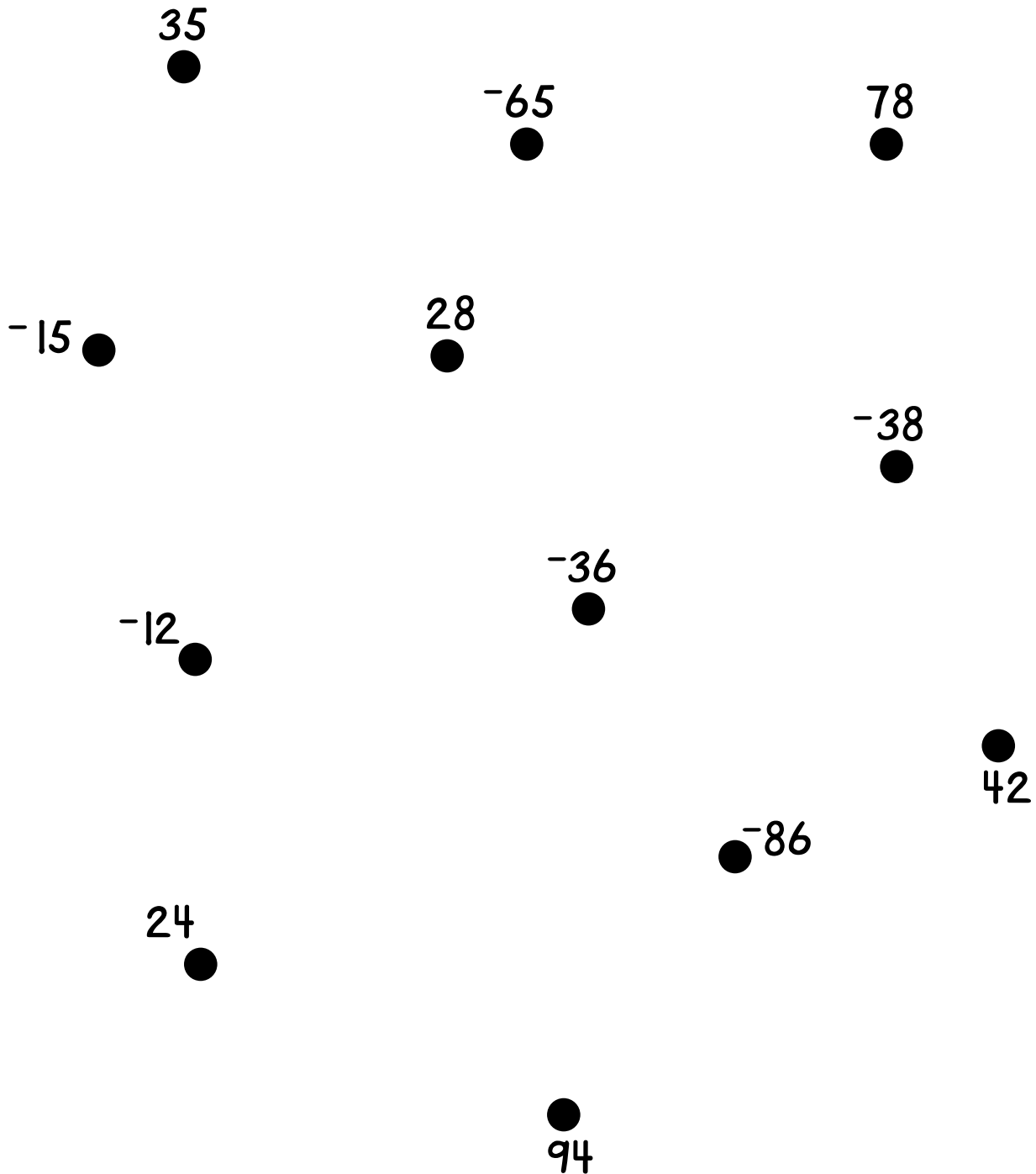
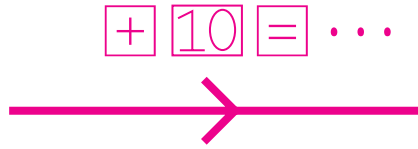
$$3 \times \square = 471$$

$$3 \times \square = 486$$

$$3 \times \square = 489$$

Name _____

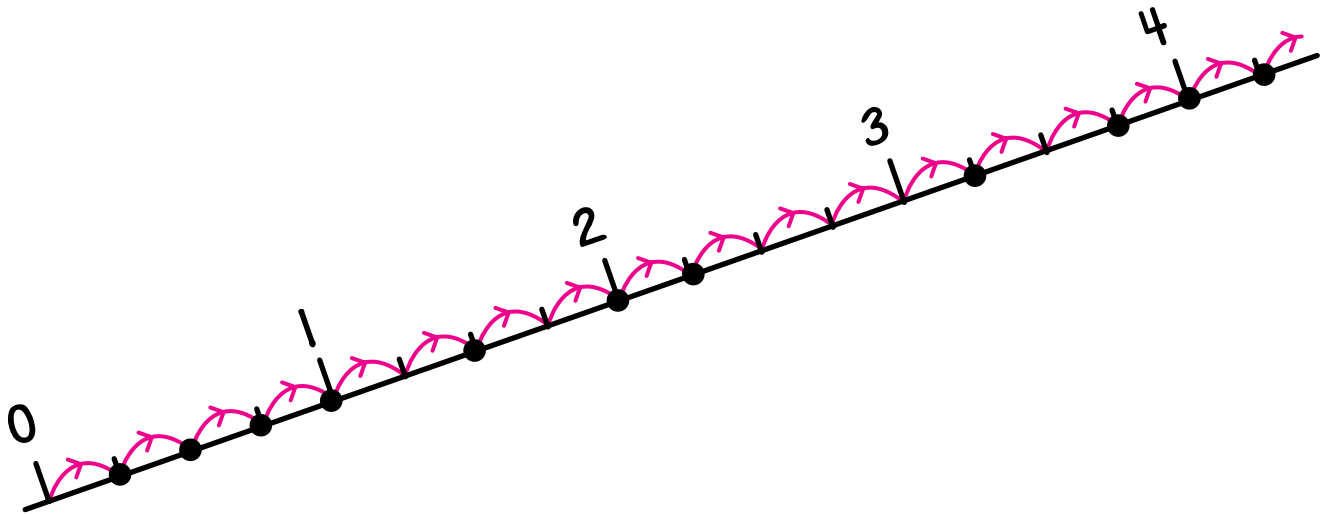
Draw as many red arrows as possible in this picture.



Name _____

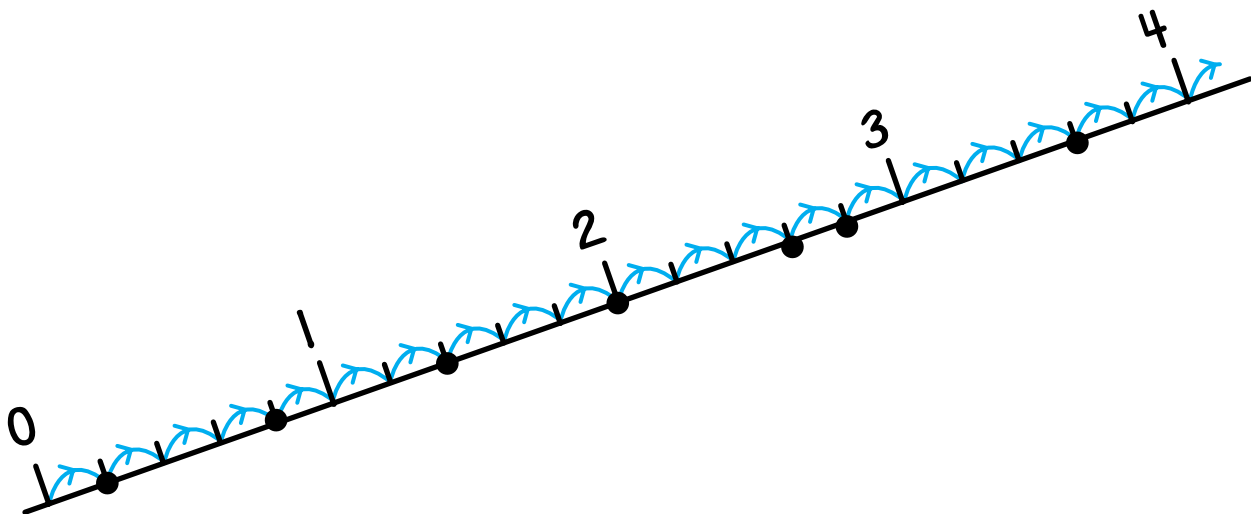
A takes four steps to reach 1.

This is a picture of **A**'s steps on the number line. Label the dots.



E takes five steps to reach 1.

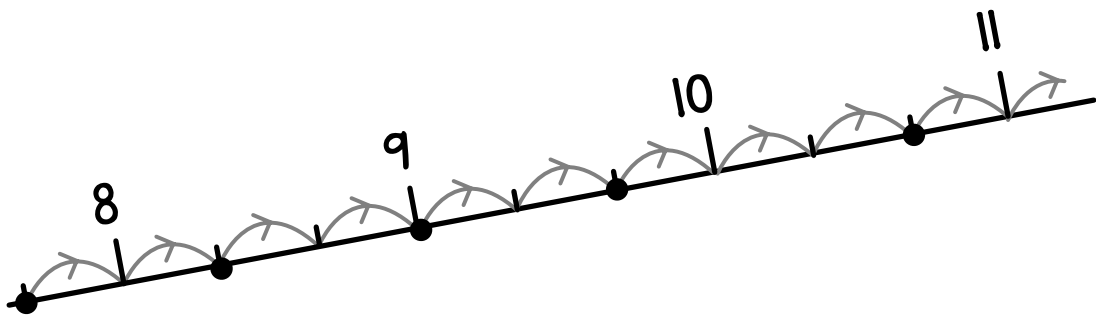
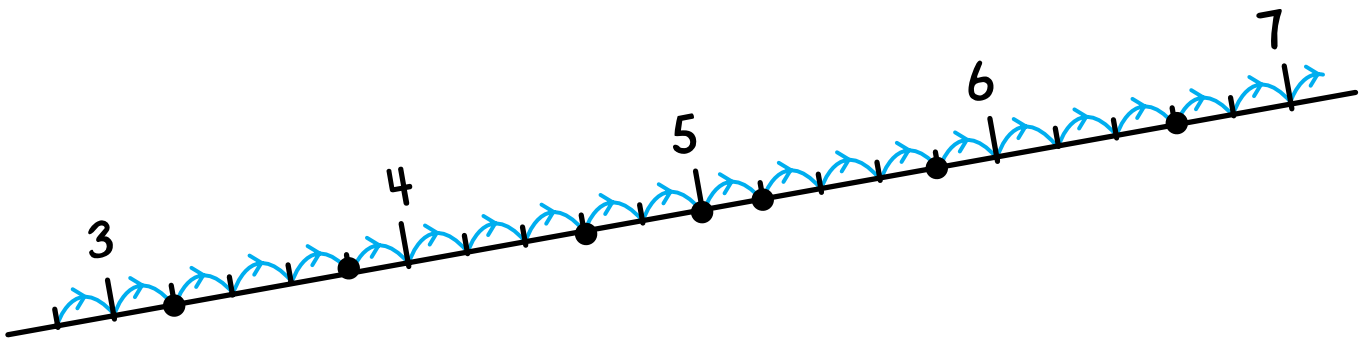
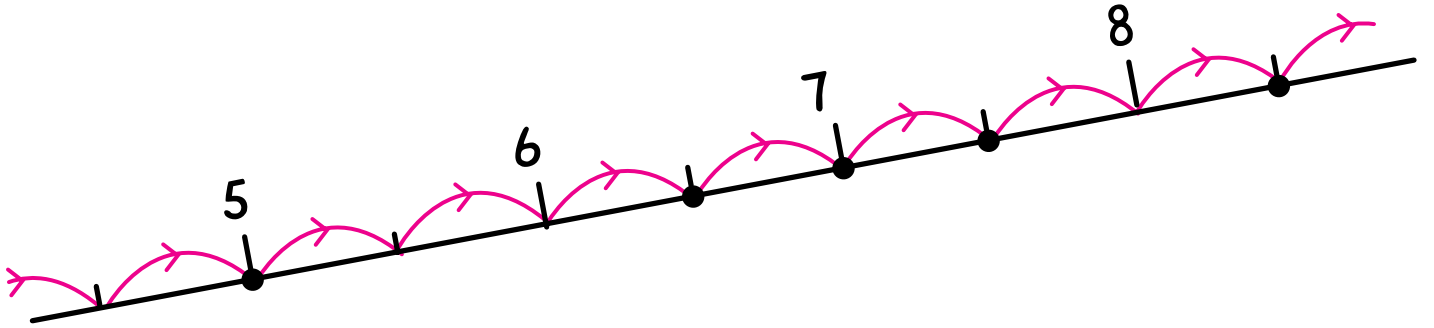
This is a picture of **E**'s steps on the number line. Label the dots.



Name _____

N17 **

Label the dots on each number line.



Name _____

N17 ***

Fill in the boxes with these numbers.

$$\frac{5}{2}$$

$$\frac{5}{3}$$

$$\frac{17}{4}$$

$$\frac{28}{5}$$

$$\frac{7}{8}$$

$$\frac{37}{10}$$

$$0 < \square < 1 < \square < 2 < \square < 3$$

$$3 < \square < 4 < \square < 5 < \square < 6$$

Name _____

N17 * * * *

Pair tags with names for the same number.
One is done for you.

$$\frac{18}{9}$$

$$\frac{1}{5}$$

$$\frac{21}{7}$$

$$\frac{2}{3}$$

$$\frac{1}{3}$$

$$\frac{5}{2}$$

$$\frac{4}{20}$$

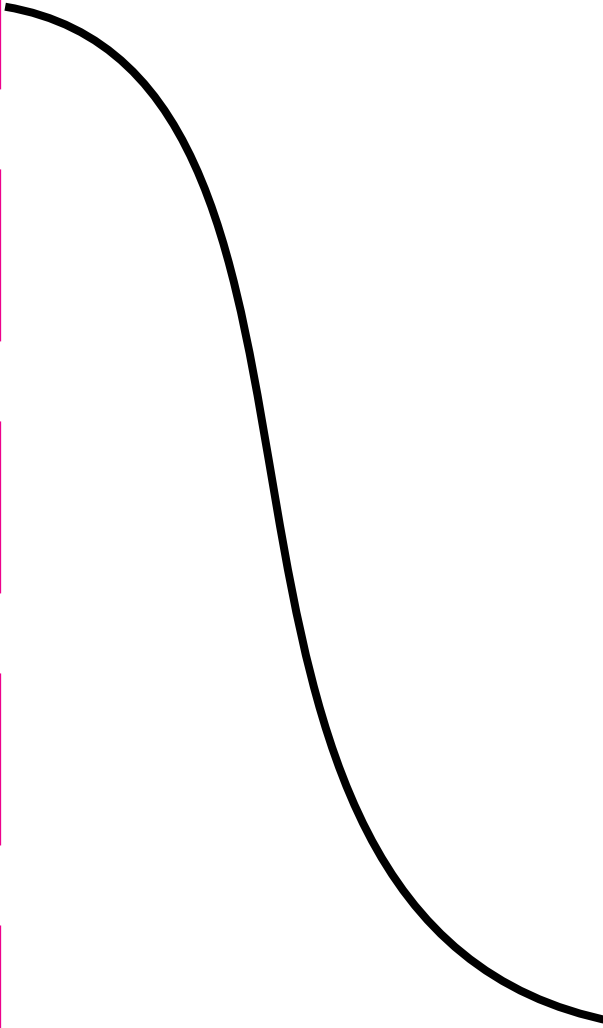
$$\frac{10}{15}$$

$$2\frac{1}{2}$$

$$3$$

$$2$$

$$\frac{4}{12}$$



Name _____

N19



1. Where is the highest point on the Earth's surface? _____
What is its elevation? _____
2. Where is the lowest point on the Earth's surface? _____
What is its elevation? _____
3. How much higher is Mount Aconcagua than Mount Kosciusko?
_____ (Show work.)
4. How much higher is Mount Everest than Mount McKinley?
_____ (Show work.)
5. Which is lower: the surface of the Dead Sea or the surface of Lake Eyre? _____
How much lower? _____ (Show work.)

Name _____

6. What is the difference in elevation between the surface of the Dead Sea and the top of Mount Everest? _____
(Show work.)

7. What is the difference in elevation between Europe's highest and lowest points? _____(Show work.)

8. Is it possible that Europe has a mountain twice as high as Mount Kosciusko? _____
If so how high would it be? _____
If not, why not? _____

Name _____

N19

9. What is the elevation of a point halfway between the top of El'brus and the top of Mount McKinley? _____(Show work.)

10. What is the elevation of a point halfway between the top of Kibo and the surface of Lake Assal? _____(Show work.)

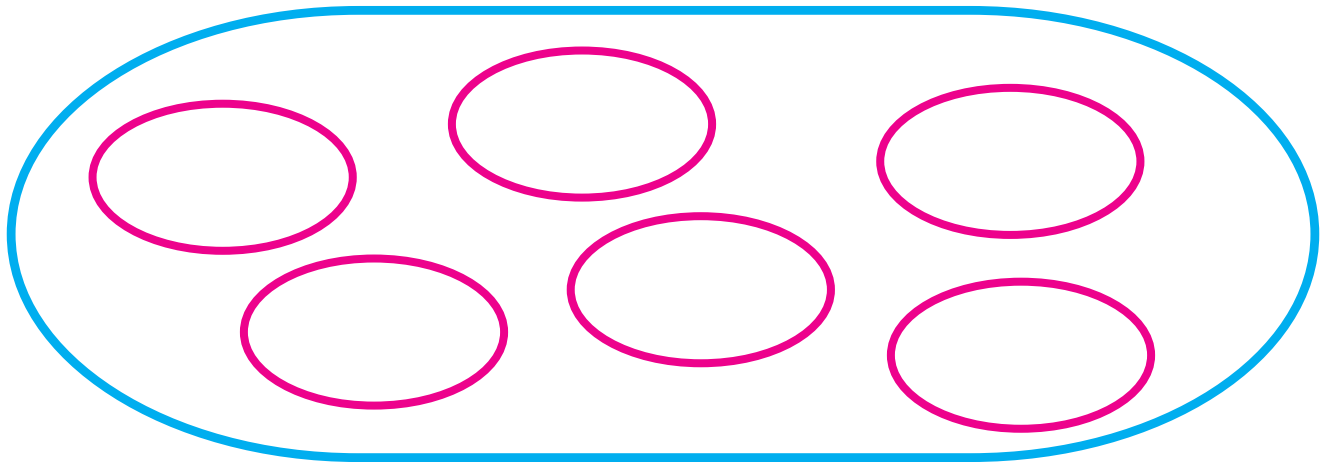
Name _____

N20

*

Share 20 apples among 6 children.

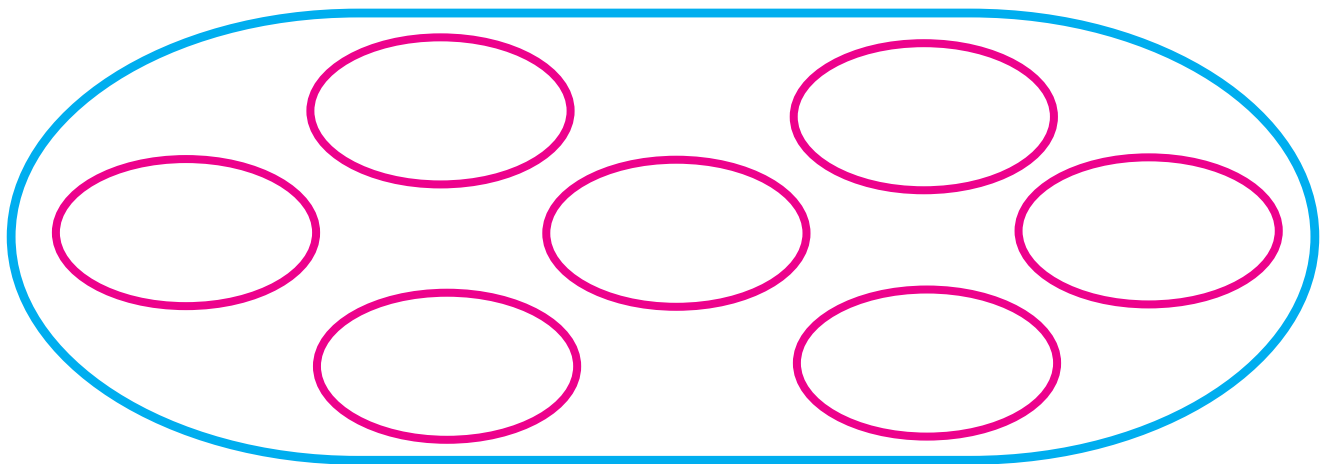
20



Write a number sentence about this situation. _____

Share 40 apples among 7 children.

40



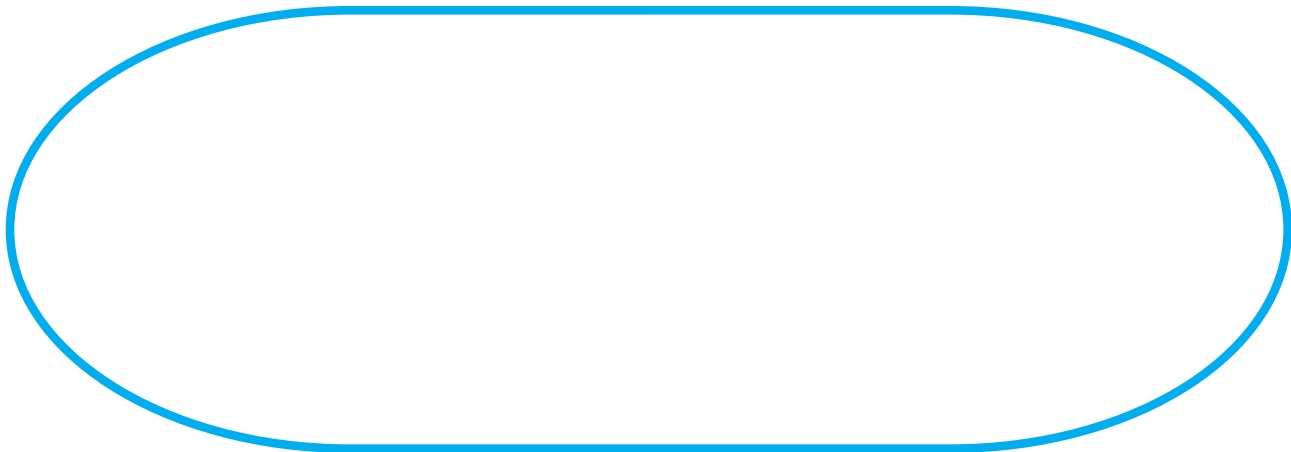
Write a number sentence about this situation. _____

Name _____

N20 **

Share 100 box tops among 9 children.

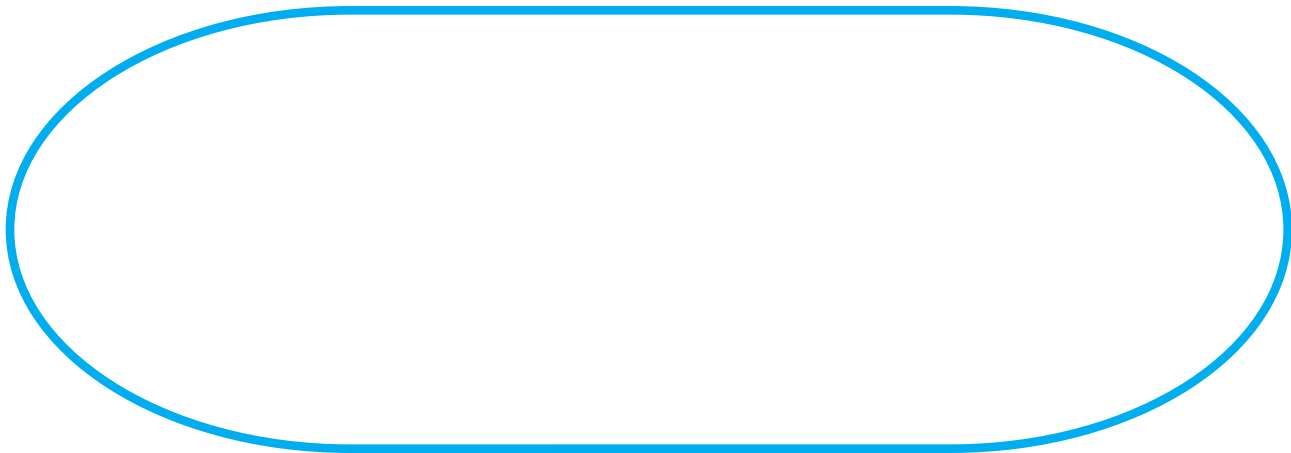
100



Write two number sentences about this situation. _____,
_____.

Share 300 box tops among 7 children.

300



Write two number sentences about this situation. _____,
_____.

Name _____

N20 ***

1. Plant 500 trees in 7 rows.

First Row	Second Row	Third Row	Fourth Row	Fifth Row	Sixth Row	Seventh Row

How many trees are there in each row? _____

How many extra trees are there? _____

Write a number sentence about this situation. _____

2. Plant 500 trees in 6 rows.

First Row	Second Row	Third Row	Fourth Row	Fifth Row	Sixth Row

How many trees are there in each row? _____

How many extra trees are there? _____

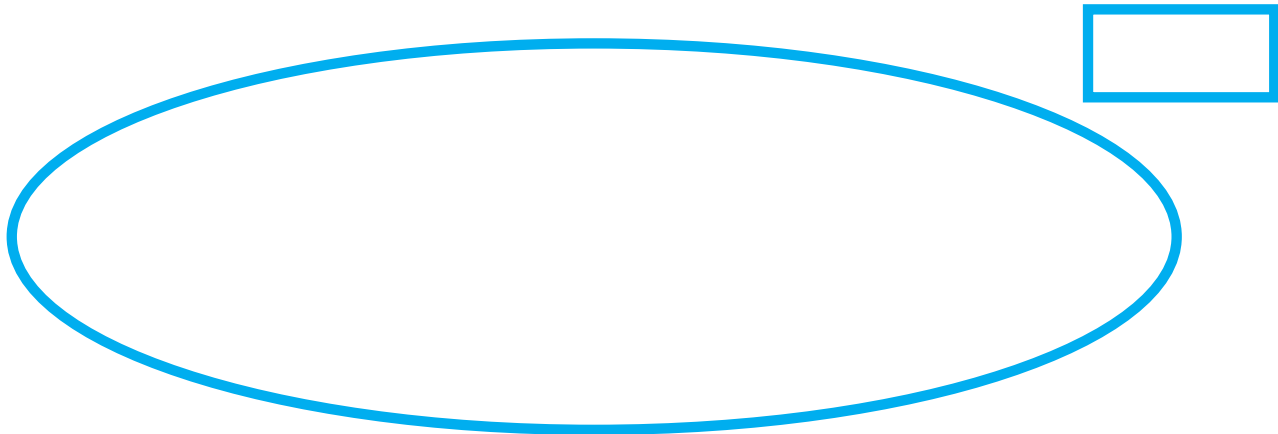
Write a number sentence about this situation. _____

Name _____

N20 * * * * *

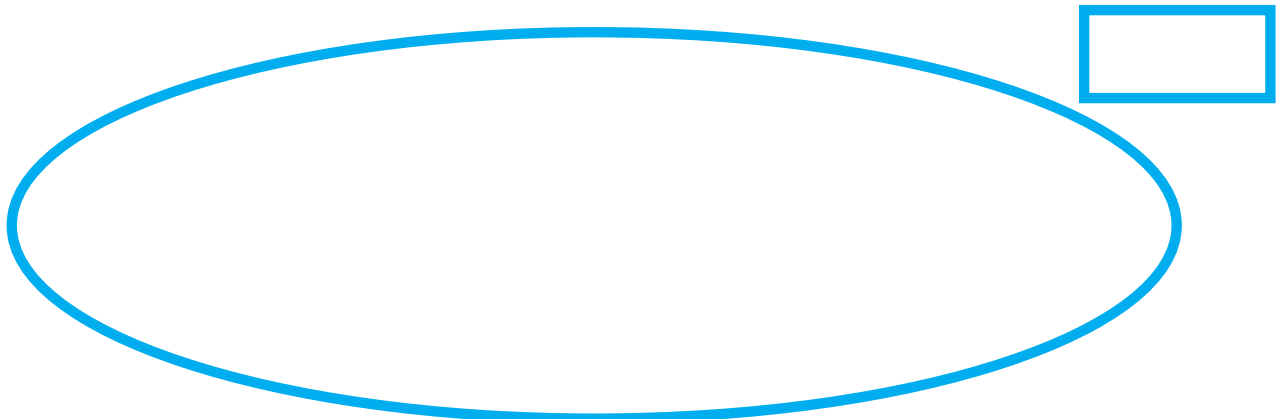
Show your calculations in the space provided.

1. Ms. Pell's Girl Scout Troop 57 ordered 300 boxes of cookies. Ms. Pell promised that she would sell 41 boxes. She divided the other boxes of cookies equally among her 7 Girl Scouts.



How many boxes did each girl receive? _____

-
2. For Thanksgiving, the fourth-grade classes of Lincoln School decided to collect cans of food for 17 needy families. Mr. Brigg's class collected 128 cans of food; Ms. Nelson's class collected 146 cans; and Ms. Gallagher's class collected 157 cans. The three classes combined all of the cans of food and shared them equally among the 17 families.



How many cans of food did each family receive? _____

How many cans were left over? _____

Name _____

$$a * b = (2 \times a) + b$$

Fill in the boxes.

$8 * 2 = \square$

$2 * 8 = \square$

$10 * 6 = \square$

$6 * 10 = \square$

$50 * 4 = \square$

$4 * 50 = \square$

$\square * 6 = 20$

$6 * \square = 20$

$6 * \square = 10$

$\square * 6 = 6$

$6 * \square = 6$

$\square * \square = 6$

Name _____

$$a * b = (2 \times a) + b$$

Fill in the tables.

$$\square * \triangle = 24$$

10	
	10
6	
	6

$$\square * \triangle = 27$$

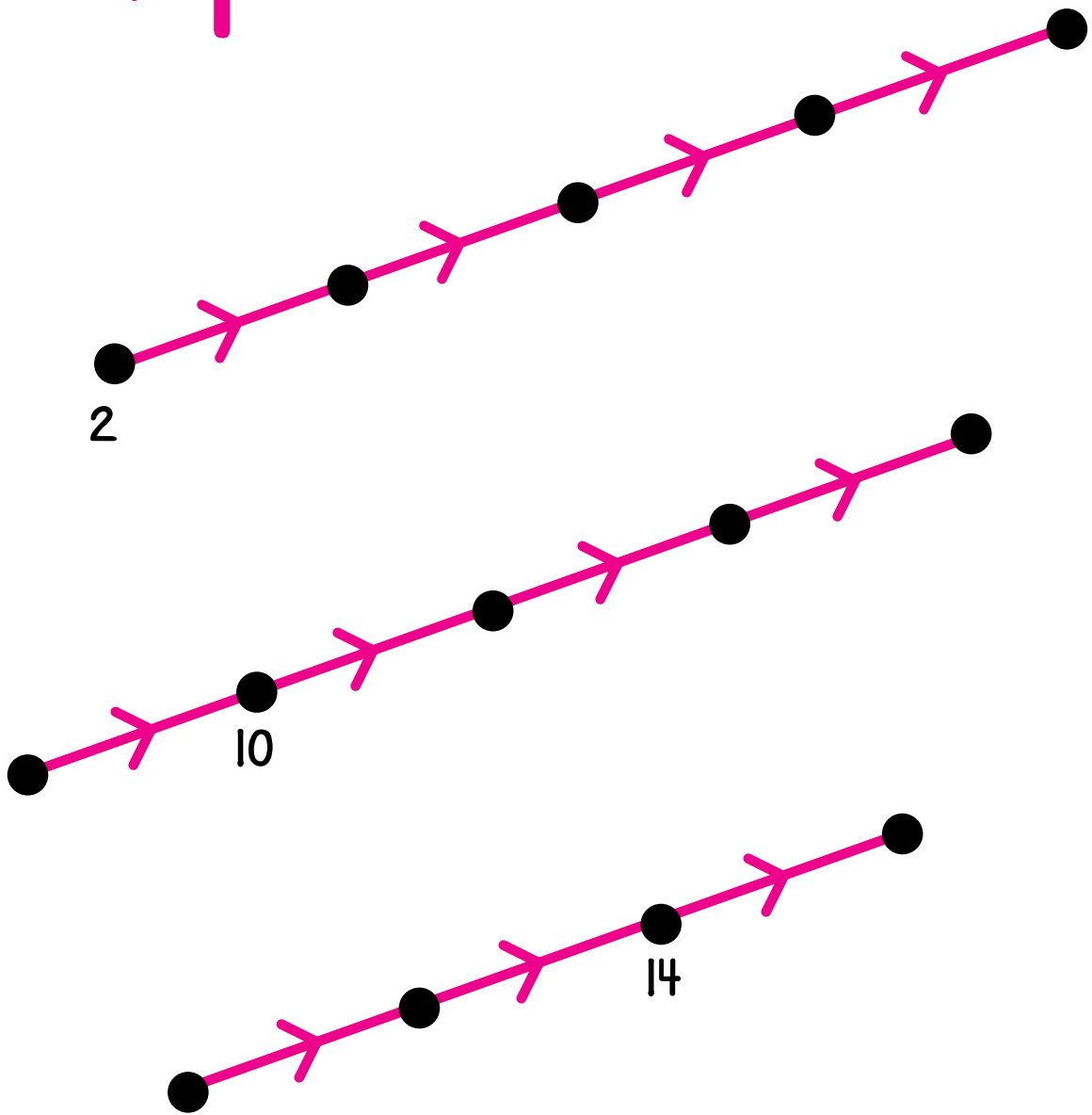
	13
12	
	11
10	

Name _____

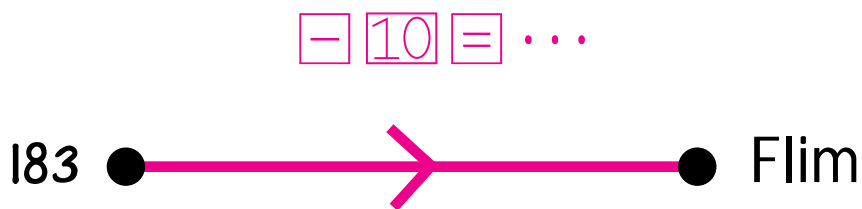
$$a * b = (2 \times a) + b$$

Label the dots.

* 4

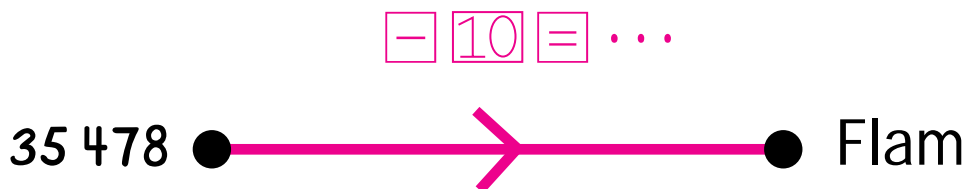


Name _____



Circle the four numbers in this list that Flim could be.

- 0 3 7 103
- 27 -7 -43 -67
-



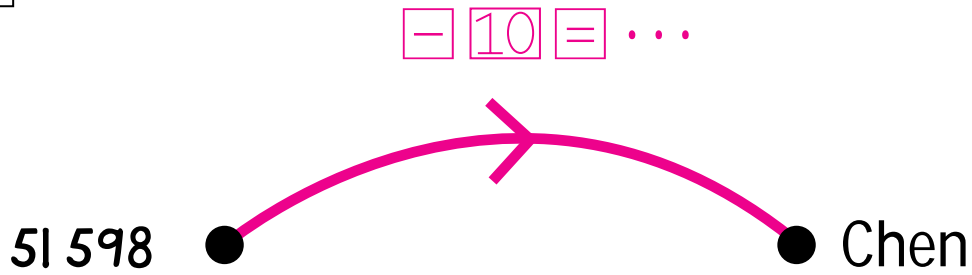
Circle the five numbers in this list that Flam could be.

- 0 2 8
- 32 -2 -8 -72
- 698 -1 352 29 028

Name _____

Chen is a secret number between -40 and 40.

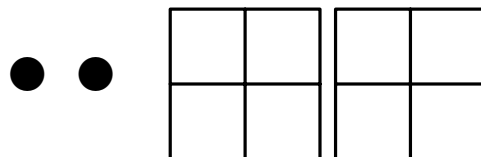
Clue 1



Chen could be _____, _____, _____, _____, _____, _____,
_____, or _____.

Clue 2

Chen can be put on this Minicomputer with exactly these two checkers.



Chen could be _____, _____, or _____.

Clue 3

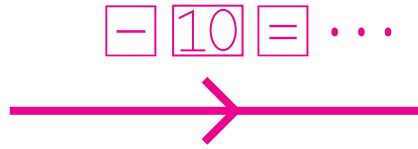
Chen is a multiple of 6.

Who is Chen? _____

Name _____

N25 ***

Draw as many red arrows as possible in this picture.



18 ●

-12 ●

● 49

98 ●

● -72

-78 ●

-28 ●

32 ●

11 ●

-39 ●

Name _____

N25 ****

Zar is a secret number.

Clue 1

Zar is the ending number of an arrow road that starts at 6 and has exactly two $2x$ arrows and two -9 arrows.

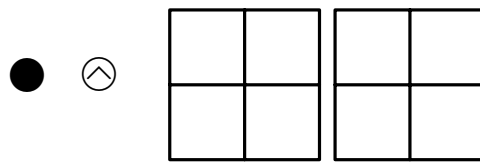
$2x$ -9

6 ●

Zar could be _____, _____, _____, _____, _____, or _____.

Clue 2

Zar can be put on this Minicomputer with exactly these two checkers.



Zar could be _____, _____, _____, or _____.

Clue 3

$-$ 5 $=$...



Who is Zar? _____

Name _____

N26

**

Fill in the boxes.

$$5 \times 9 = 45$$

$$6 \times 9 = \square$$

$$7 \times 9 = \square$$

$$8 \times 9 = \square$$

$$11 \times 14 = \square$$

$$12 \times 14 = 168$$

$$13 \times 14 = \square$$

$$14 \times 14 = \square$$

$$33 \times 21 = \square$$

$$34 \times 21 = 714$$

$$35 \times 21 = \square$$

$$16 \times 32 = 512$$

$$18 \times 32 = \square$$

$$19 \times 32 = \square$$

$$21 \times 55 = \square$$

$$22 \times 55 = \square$$

$$23 \times 55 = 1265$$

$$10 \times 67 = \square$$

$$20 \times 67 = \square$$

$$40 \times 67 = \square$$

Name _____

N26

Complete:

$10 \times 54 = \underline{\hspace{2cm}}$

$3 \times 54 = \underline{\hspace{2cm}}$

$13 \times 54 = \underline{\hspace{2cm}}$

$30 \times 54 = \underline{\hspace{2cm}}$

$43 \times 54 = \underline{\hspace{2cm}}$

$60 \times 54 = \underline{\hspace{2cm}}$

$59 \times 54 = \underline{\hspace{2cm}}$

$100 \times 54 = \underline{\hspace{2cm}}$

$103 \times 54 = \underline{\hspace{2cm}}$

$130 \times 54 = \underline{\hspace{2cm}}$

$133 \times 54 = \underline{\hspace{2cm}}$

Name _____

N26 ****

$$3 \times 46 = 138 \qquad 10 \times 46 = 460$$

Fill in the boxes. The first one is done for you.

1) $460 + 138 = \boxed{13} \times 46$

2) $460 - 138 = \boxed{} \times 46$

3) $460 + 138 + 138 = \boxed{} \times 46$

4) $460 + 460 + 460 = \boxed{} \times 46$

5) $3 \times 460 = \boxed{} \times 46$

6) $460 + 46 = \boxed{} \times 46$

7) $460 - 46 = \boxed{} \times 46$

8) $4\ 600 = \boxed{} \times 46$

9) $4\ 600 + 138 = \boxed{} \times 46$

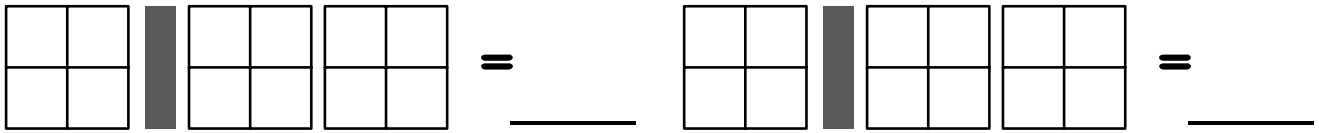
10) $4\ 600 + 460 = \boxed{} \times 46$

11) $4\ 600 + 460 + 138 = \boxed{} \times 46$

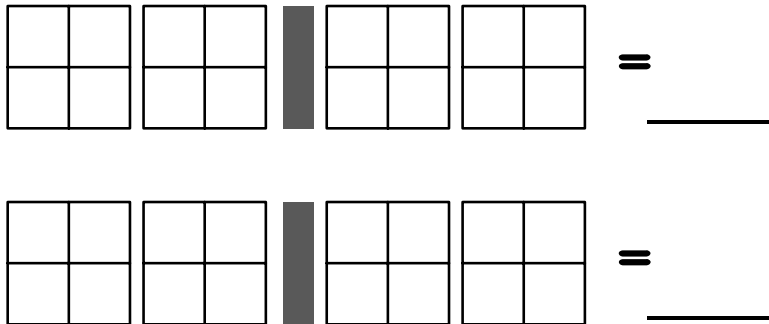
Name _____

Put any numbers you wish on the Minicomputer.

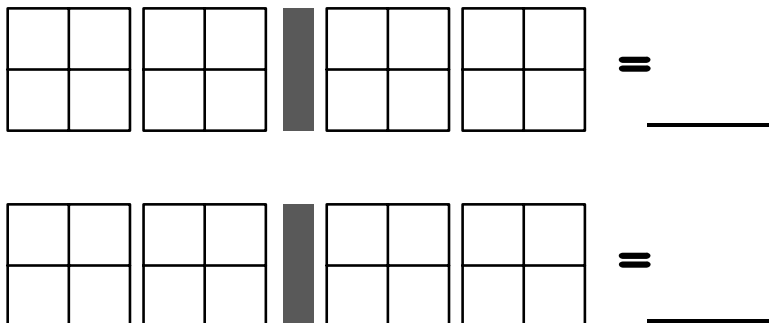
Use exactly one $\textcircled{10}$ -checker.



Use exactly two $\textcircled{10}$ -checkers.



Use exactly three $\textcircled{10}$ -checkers.



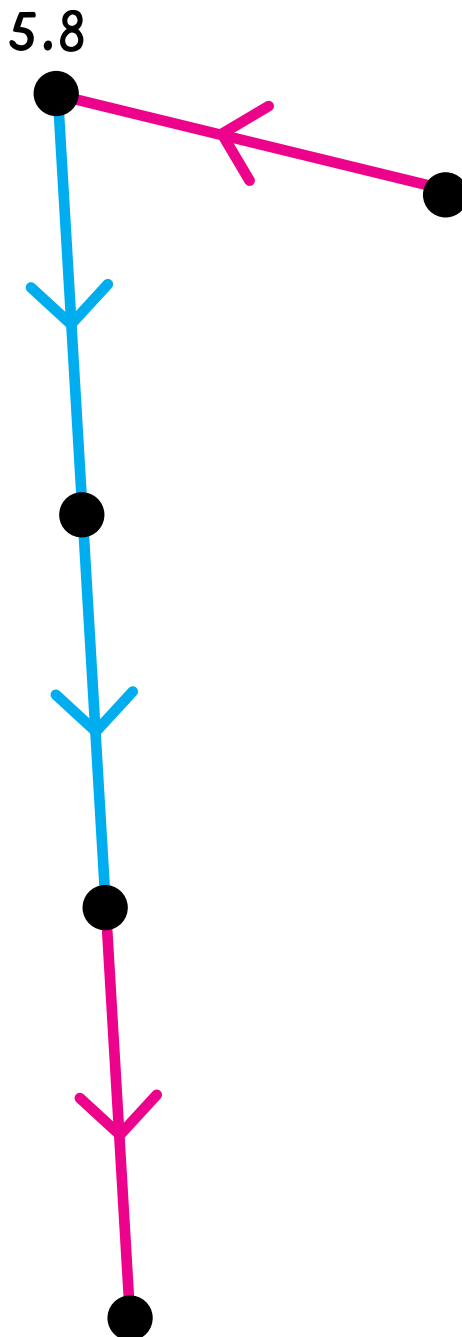
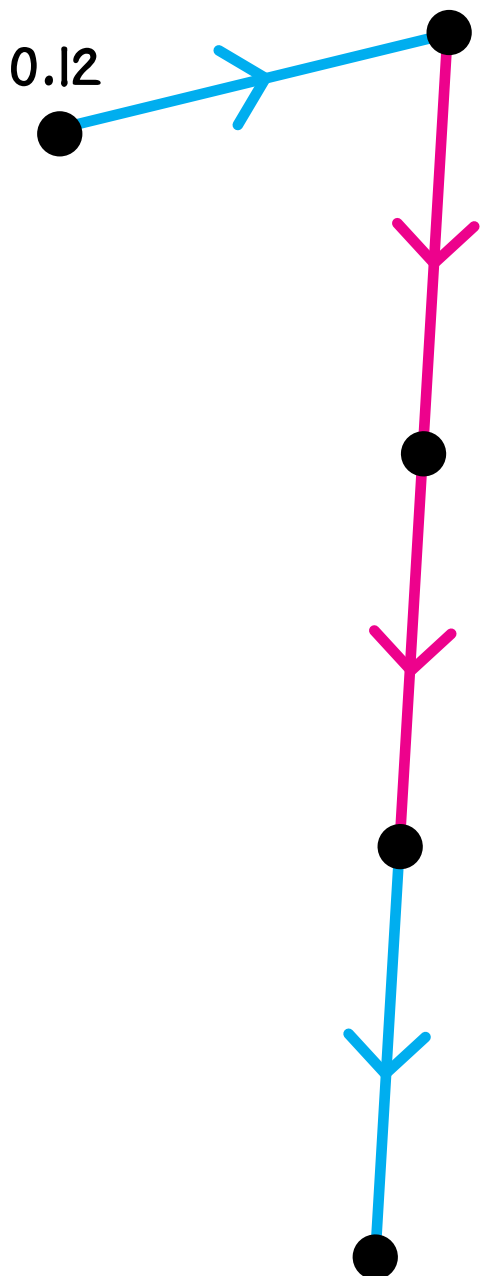
Name _____

N27 **

Label the dots.

$10\times$

$+0.8$

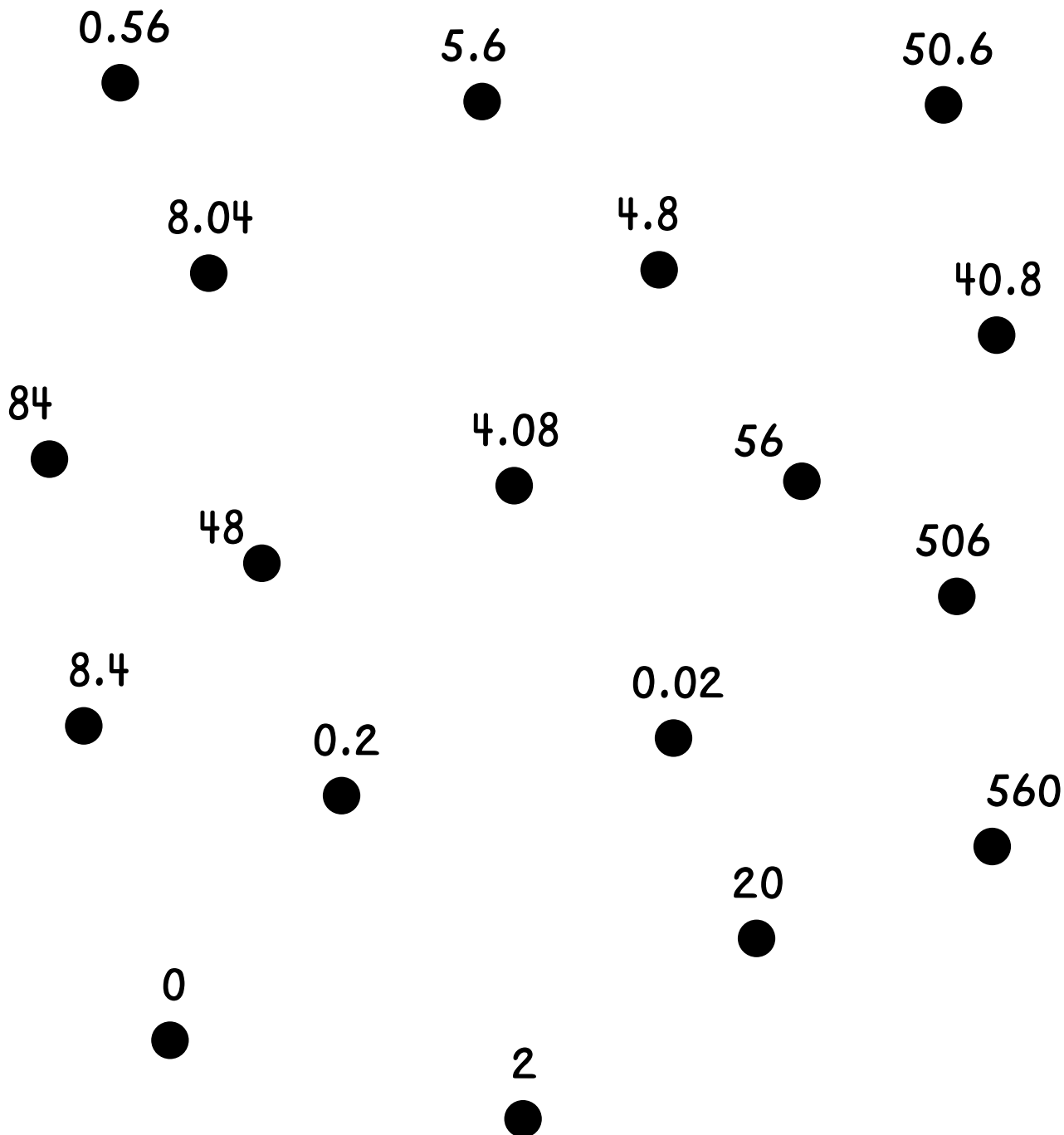


Name _____

N27 ***

Draw as many 10x arrows as possible in this picture.

10x



Name _____

N27 * * * * *

Put these numbers on the Minicomputer. You may only use $\textcircled{10}$ -checkers.

13.6 =

20.9 =

100.7 =

1586 =

2582.3 =

Name _____

Nabu must put 110 bottles into cartons that hold 8 bottles each.
Draw an arrow road to calculate how many cartons he will fill.



How many cartons will Nabu fill? _____

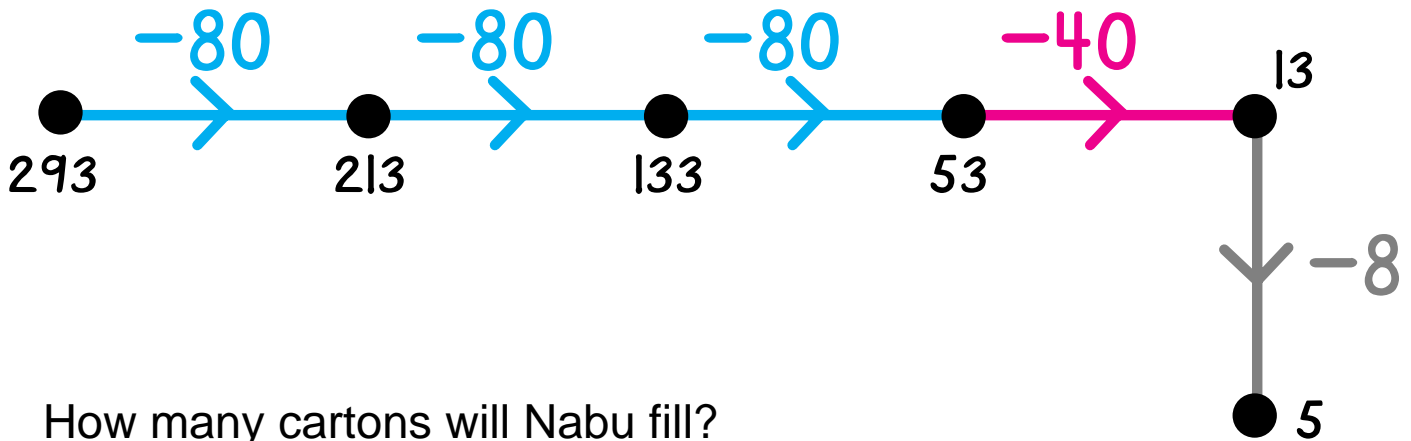
How many bottles will be left over? _____

Name _____

N28

**

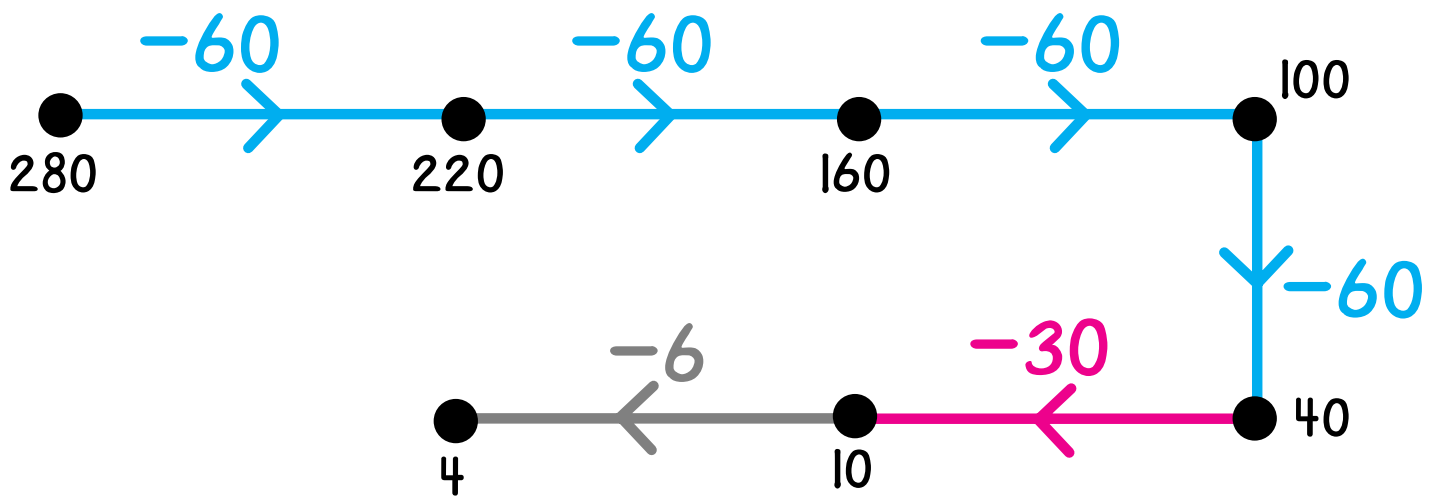
One day Nabu is given 293 bottles to put into cartons that hold 8 bottles each. He draws this arrow picture to calculate how many cartons he will fill.



How many cartons will Nabu fill? _____

How many bottles will be left over? _____

Another day Nabu is given 280 bottles to put into cartons that hold 6 bottles each. He draws this arrow picture to calculate how many cartons he will fill.



How many cartons will he fill? _____

How many bottles will be left over? _____

Name _____

N28	***
-----	-----

Nabu must put 500 bottles into cartons that hold 15 bottles each.
Draw an arrow road to calculate how many cartons he will fill.



How many cartons will Nabu fill? _____

How many bottles will be left over? _____

Name _____

N29 *

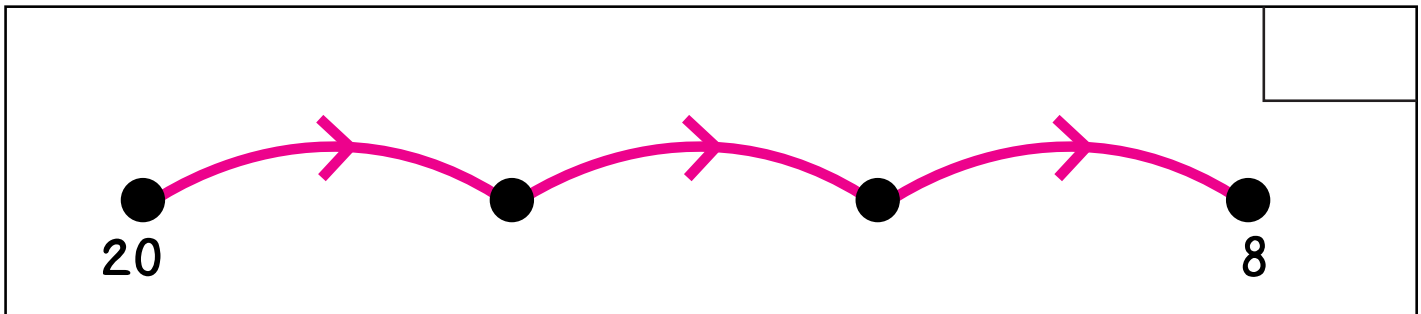
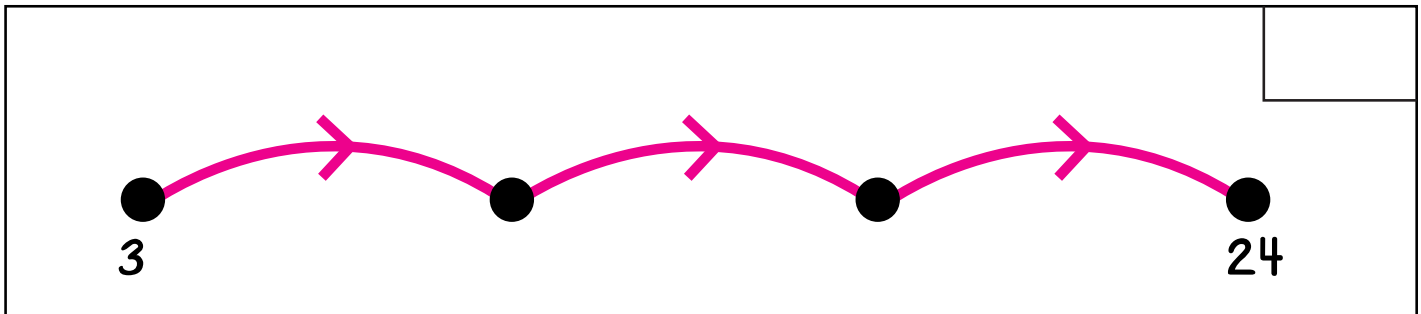
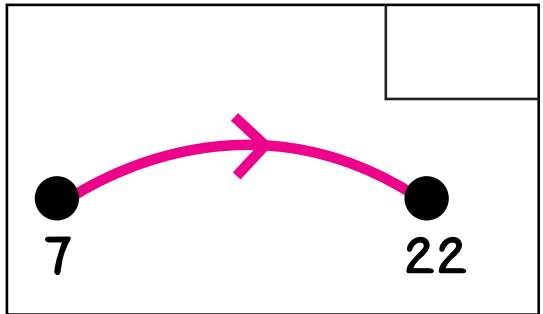
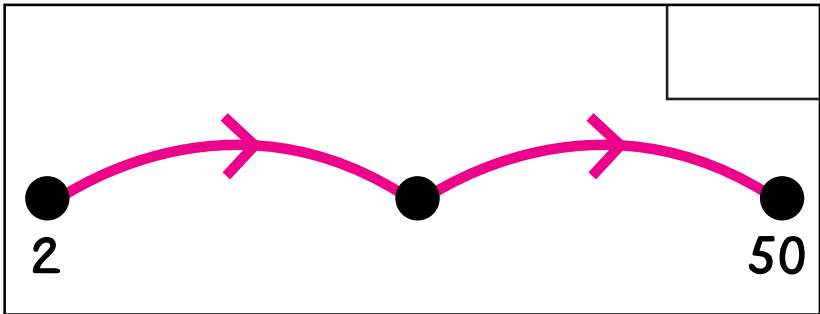
For each arrow picture, fill in the box in the upper right-hand corner with one of these tags. Then label the dots.

+15

$\times 2$

-4

$\times 5$



Name _____

N29 **

For each arrow picture, fill in the box in the upper right-hand corner with one of these tags. Then label the dots.

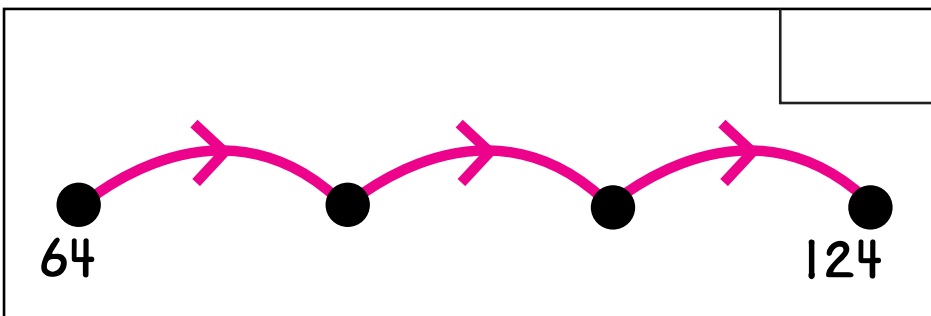
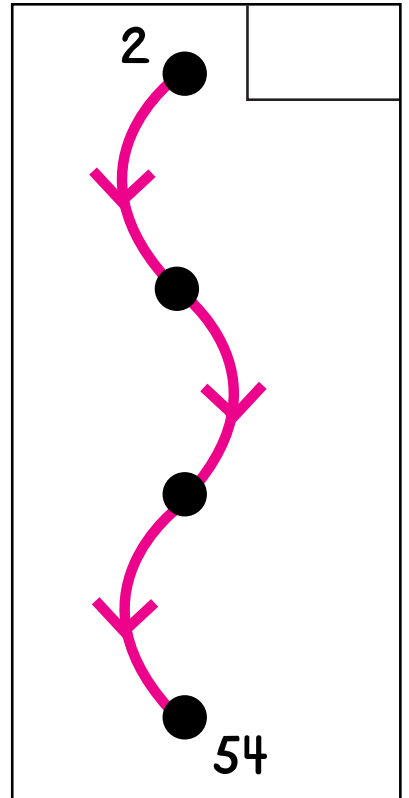
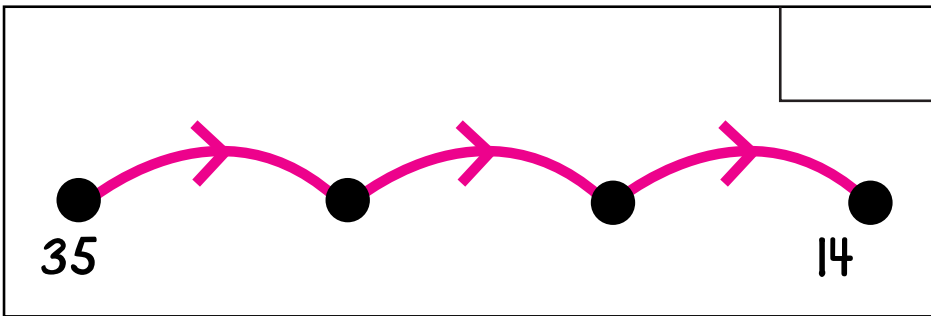
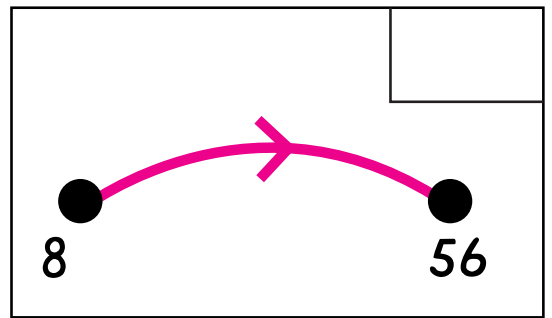
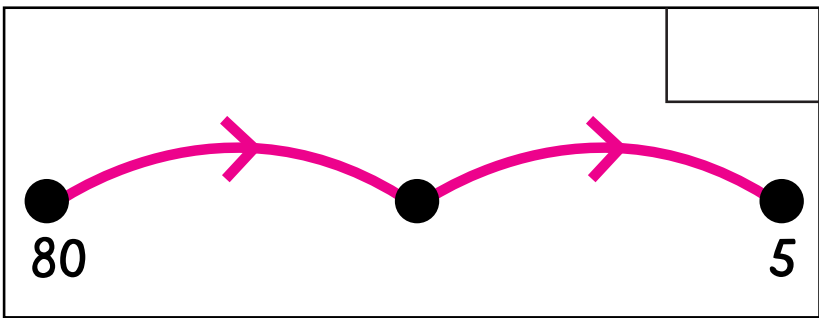
-7

$+20$

$\times 7$

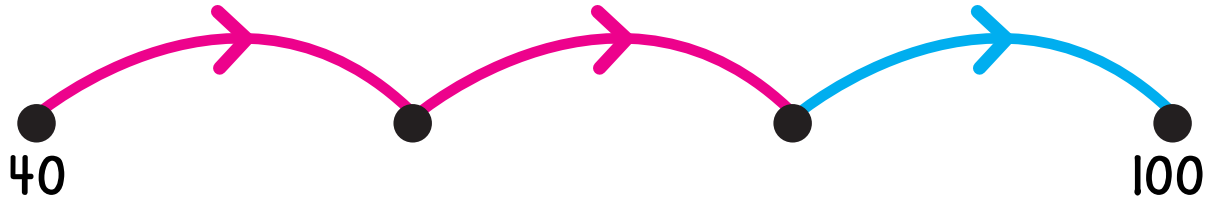
$\div 4$



$\times 3$





Name _____

Complete the charts.



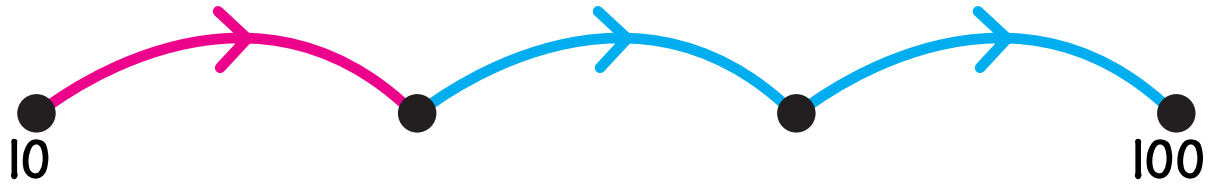
	
+20	
-20	
÷2	
	+50
	+40
	+80



	
-30	
-40	
	÷2
	×10



Name _____

N29 *****

Complete the charts.

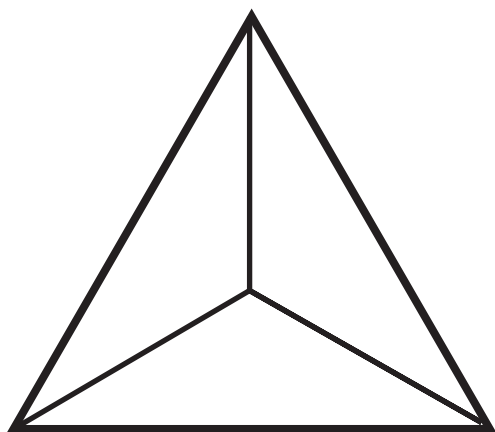


	
$\times 2$	
$\times 20$	
	$\div 2$
	$\times 2$
$\times 3$	
$\times 30$	

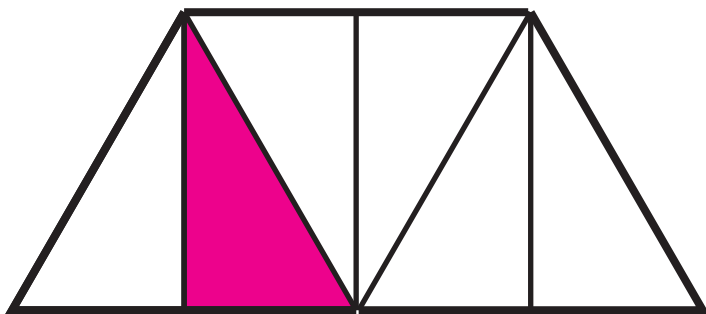
	
-30	
-20	
	$\times 10$
	-25

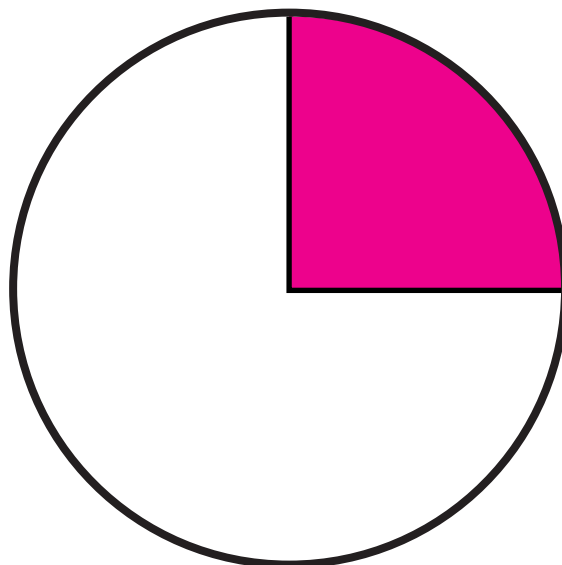
Name _____

Color one-third of each shape red.



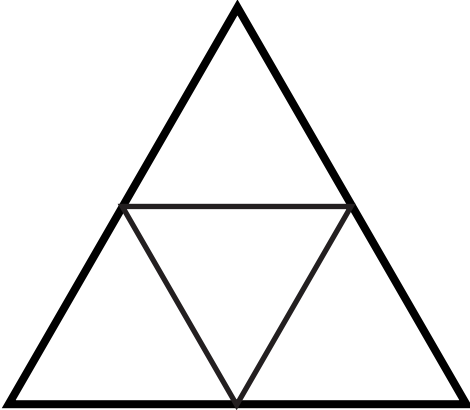
What fractional part of each shape is colored red?



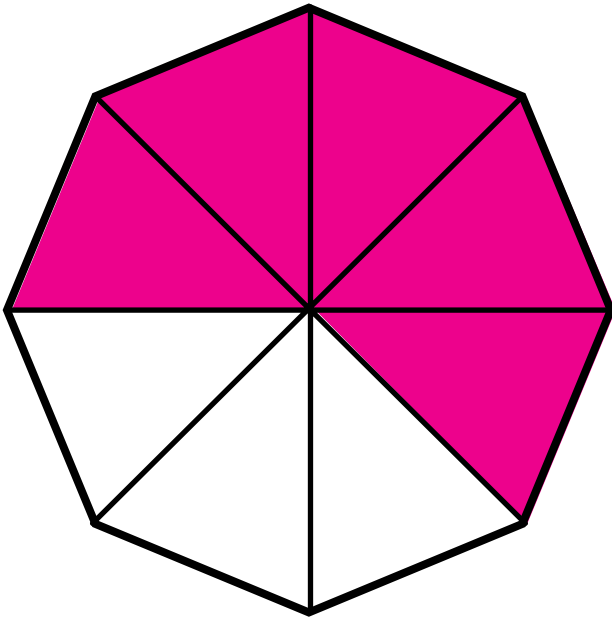


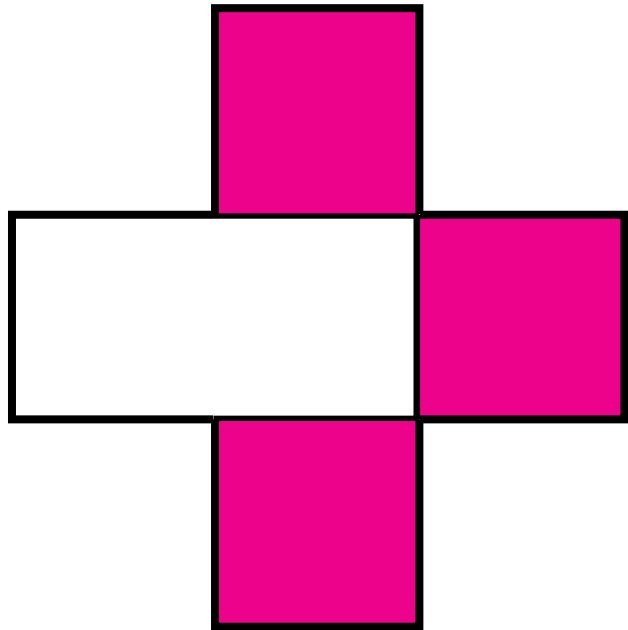
Name _____

Color three-fourths of each shape red.



What fractional part of each shape is colored red?



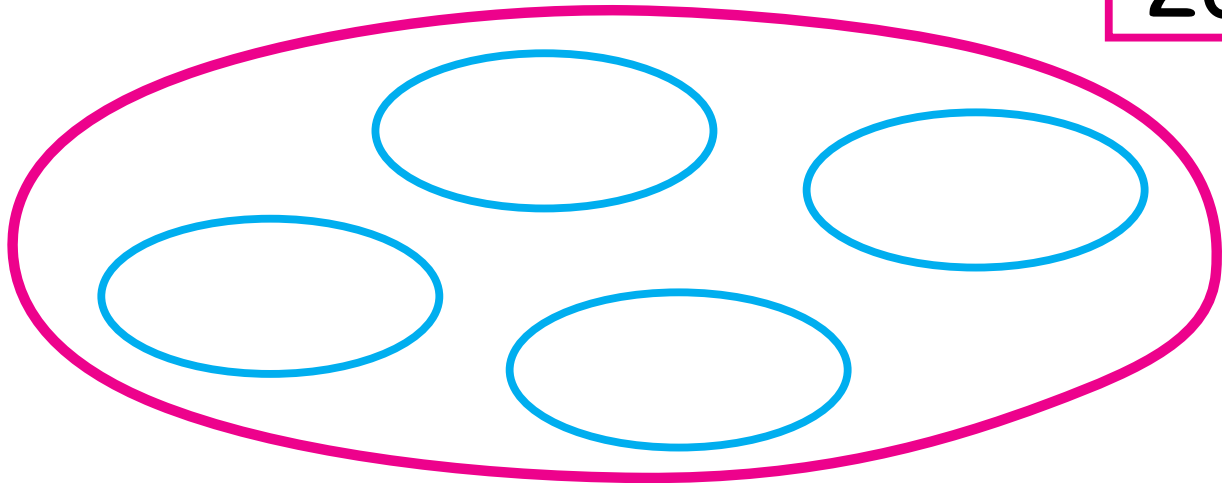


Name _____

N30

The zookeeper gives 20 bananas to 4 chimpanzees.

20



Complete.

$$\frac{1}{4} \text{ of } 20 = \underline{\quad\quad} \quad \frac{3}{4} \text{ of } 20 = \underline{\quad\quad}$$

The zookeeper gives 30 bananas to 5 monkeys.

30



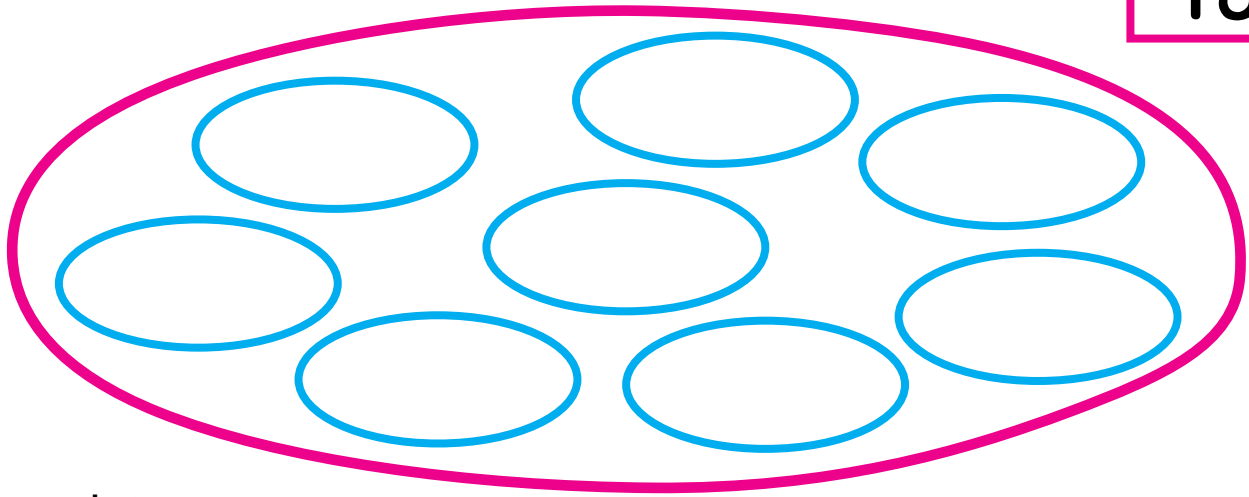
Complete.

$$\begin{array}{l} \frac{1}{5} \text{ of } 30 = \underline{\quad\quad} \quad \frac{3}{5} \text{ of } 30 = \underline{\quad\quad} \\ \frac{2}{5} \text{ of } 30 = \underline{\quad\quad} \quad \frac{4}{5} \text{ of } 30 = \underline{\quad\quad} \end{array}$$

Name _____

N30 *****

48



Complete.

$$\frac{3}{8} \text{ of } 48 = \underline{\hspace{2cm}} \quad \frac{7}{8} \text{ of } 48 = \underline{\hspace{2cm}}$$

120

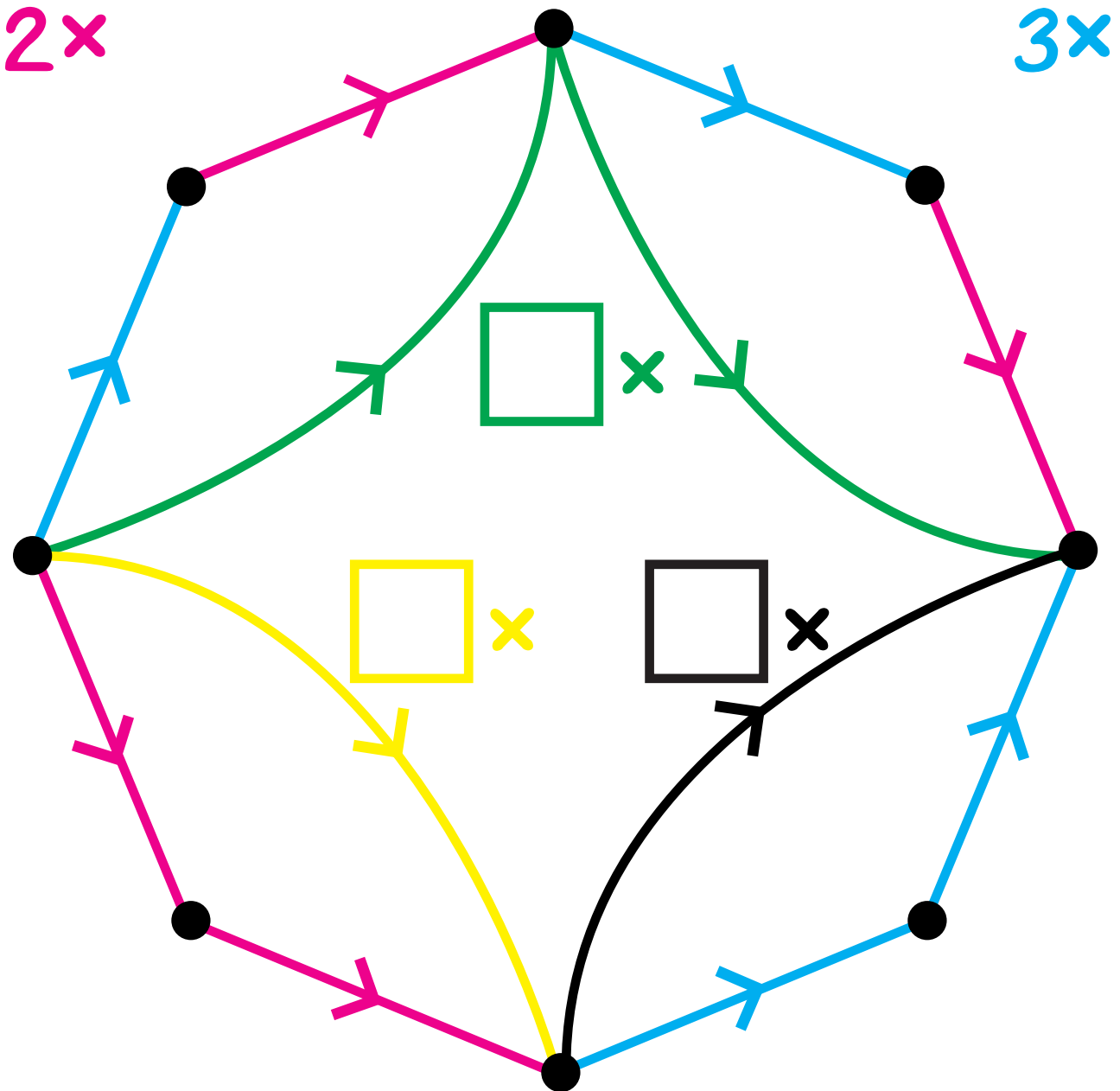


Complete.

$$\frac{2}{5} \text{ of } 120 = \underline{\hspace{2cm}} \quad \frac{3}{5} \text{ of } 120 = \underline{\hspace{2cm}}$$

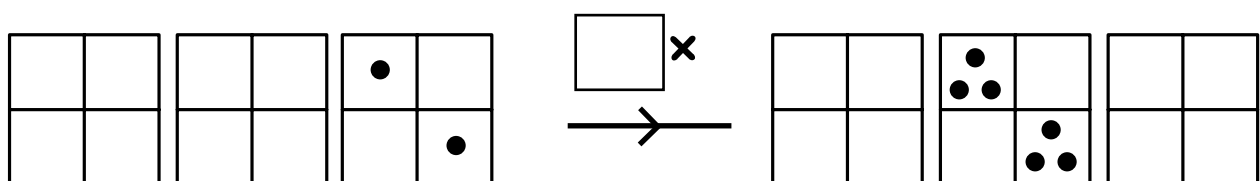
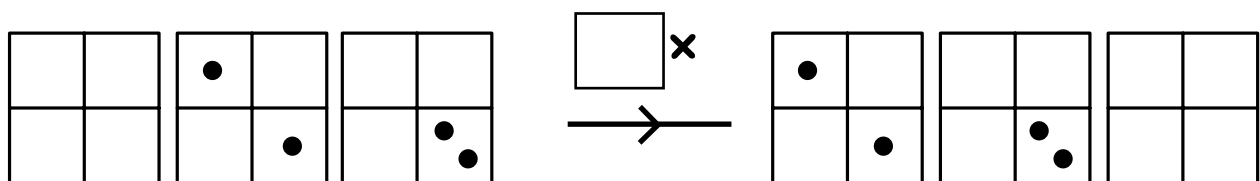
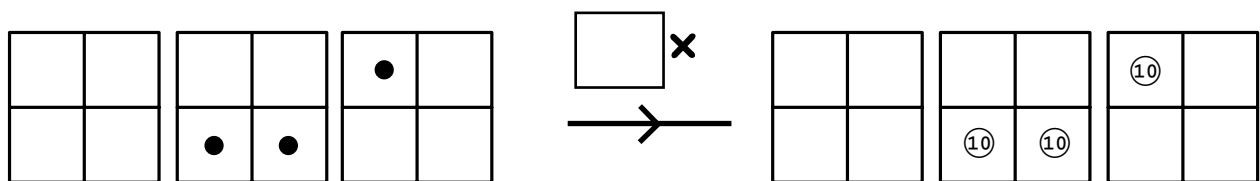
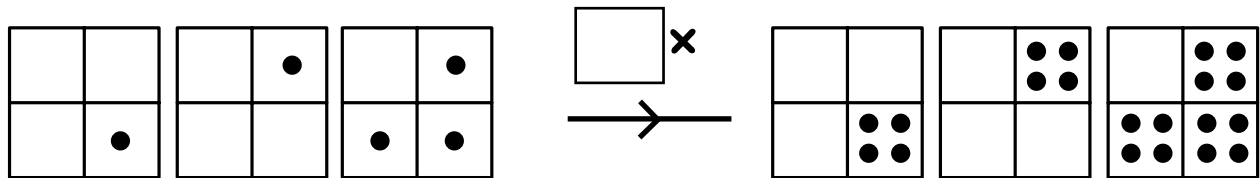
Name _____

Label the dots and then fill in the boxes.



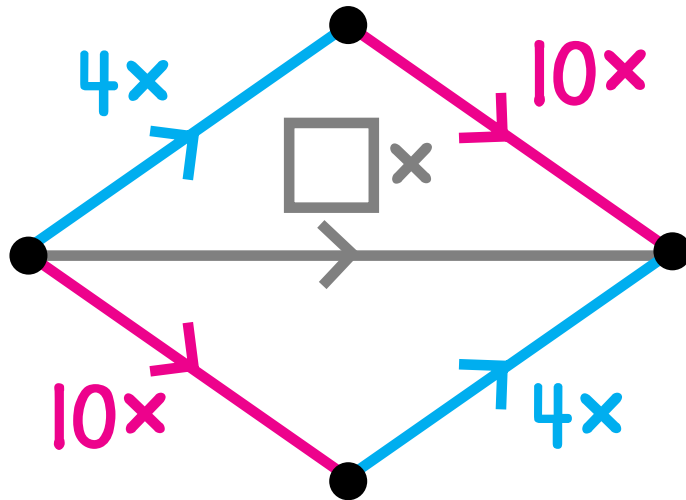
Name _____

Label each arrow.



Name _____

In each picture, first label the gray arrow. Then use the arrow picture to help you with the calculations.

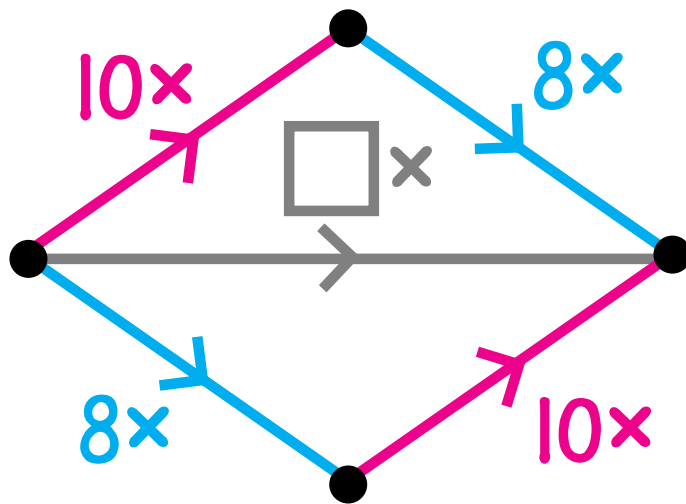


$40 \times 6 = \underline{\quad}$

$40 \times 81 = \underline{\quad}$

$40 \times 62 = \underline{\quad}$

$40 \times 53 = \underline{\quad}$



$80 \times 7 = \underline{\quad}$

$80 \times 61 = \underline{\quad}$

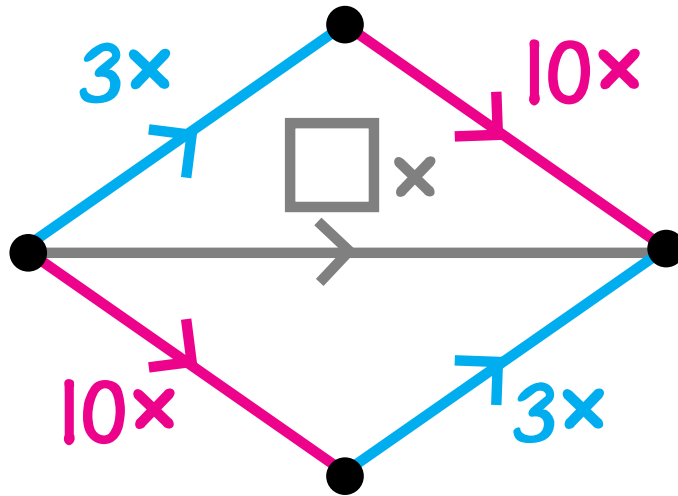
$80 \times 72 = \underline{\quad}$

$80 \times 59 = \underline{\quad}$

Name _____

N33 ****

In each picture, first label the gray arrow. Then use the arrow picture to help you with the calculations.

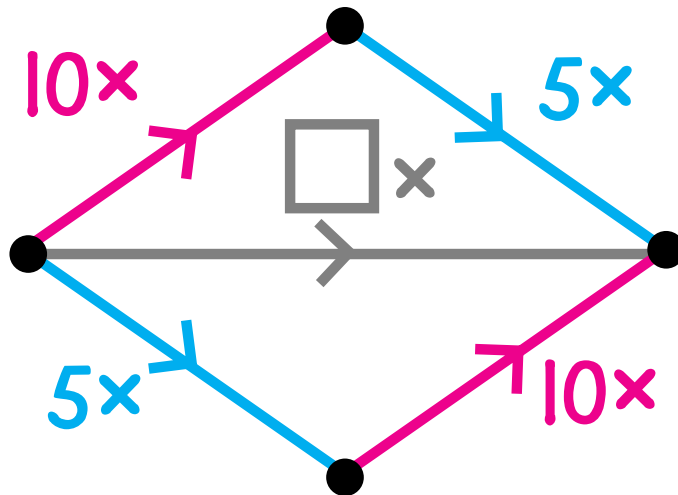


$$30 \times 1.2 = \underline{\quad}$$

$$30 \times 2.31 = \underline{\quad}$$

$$30 \times 5.6 = \underline{\quad}$$

$$30 \times 7.49 = \underline{\quad}$$



$$50 \times 8.3 = \underline{\quad}$$

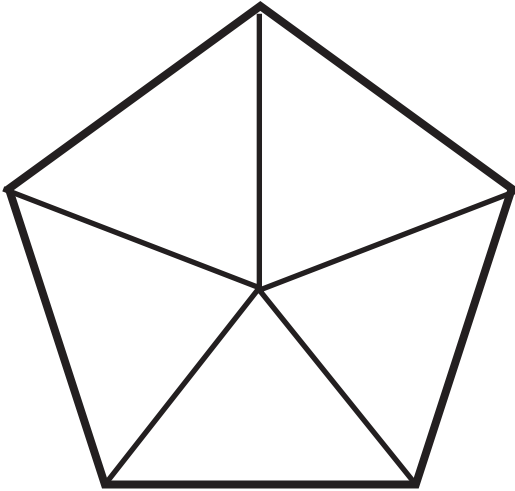
$$50 \times 6.07 = \underline{\quad}$$

$$50 \times 13.5 = \underline{\quad}$$

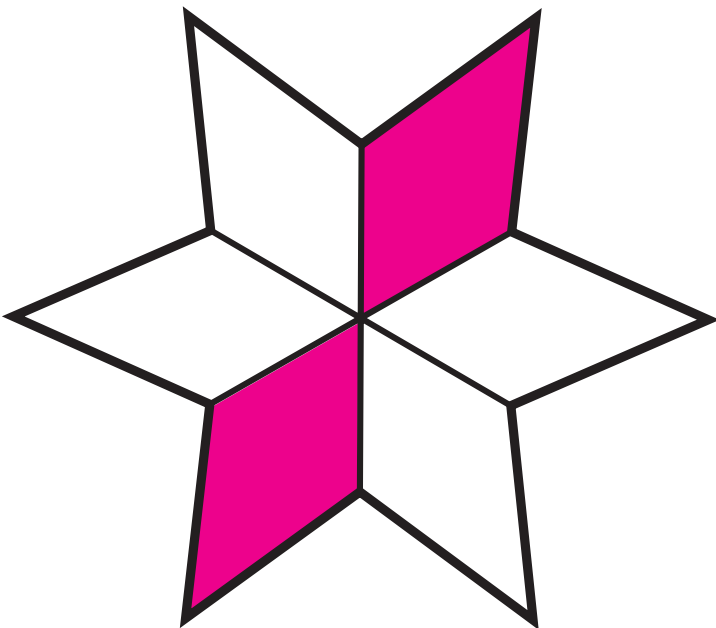
$$50 \times 10.19 = \underline{\quad}$$

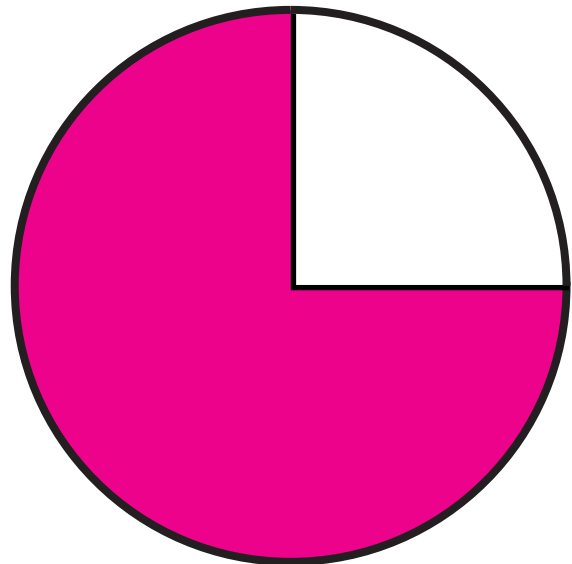
Name _____

Color two-fifths of each shape red.



What fractional part of each shape is colored red?





Name _____

N34

**

The zookeeper gives 24 bananas to 3 chimpanzees.

24



Complete.

$$\frac{1}{3} \text{ of } 24 = \underline{\quad\quad} \quad \frac{2}{3} \text{ of } 24 = \underline{\quad\quad}$$

The zookeeper gives 30 bananas to 4 monkeys.



Complete.

$$\frac{1}{4} \text{ of } 24 = \underline{\quad\quad} \quad \frac{3}{4} \text{ of } 24 = \underline{\quad\quad}$$

Name _____

This is a picture of a floor.



Maybelle and Sam agree to paint the floor. Maybelle can work for 3 hours, and Sam can work for 1 hour. Divide the rectangle to show how they could share the work fairly. Color Maybelle's share red and color Sam's share blue.

This is another picture of a floor.



Maria and Yang agree to paint this floor. Maria can work for 2 hours, and Yang can work for 3 hours. Divide the rectangle to show how they could share the work fairly. Color Maria's share red and color Yang's share blue.

Name _____

N34 ****

Burke, Naomi, and Luis paint a picket fence with 117 pickets. Burke can work 4 hours, Naomi can work 3 hours, and Luis can work 2 hours. How many pickets should each paint?

Burke: _____ Naomi: _____ Luis: _____



Mr. Kirby pays the three children a total of \$27. How much money should each child receive?

Burke: _____ Naomi: _____ Luis: _____



Name _____

L1 *

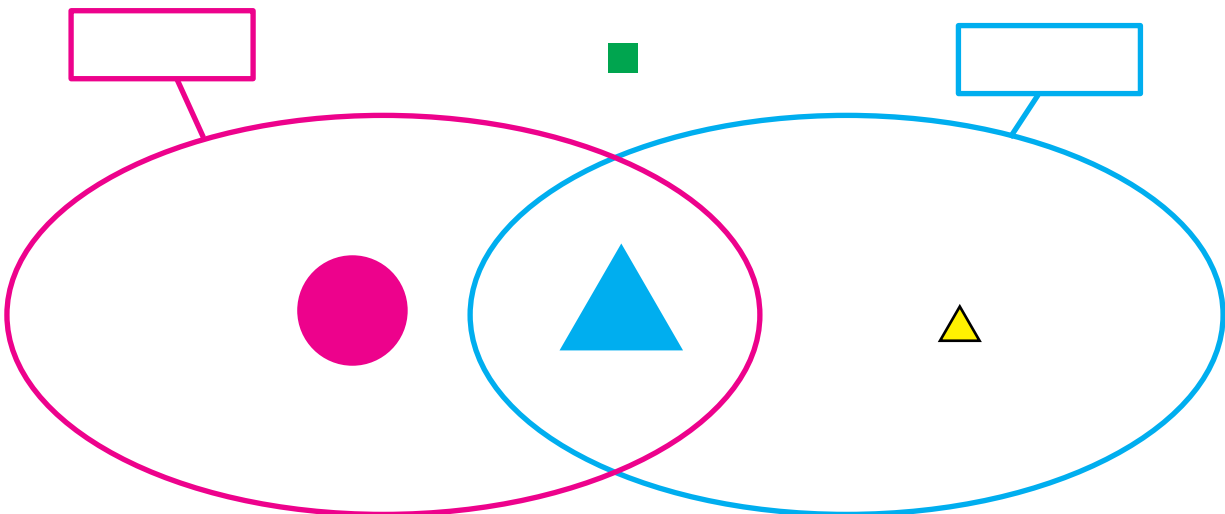
The red string is one of these:

The blue string is one of these:

RED	YELLOW	GREEN	BLUE
NOT RED	NOT YELLOW	NOT GREEN	NOT BLUE
○	△	□	BIG
NOT ○	NOT △	NOT □	LITTLE

RED	YELLOW	GREEN	BLUE
NOT RED	NOT YELLOW	NOT GREEN	NOT BLUE
○	△	□	BIG
NOT ○	NOT △	NOT □	LITTLE

Give the strings correct labels.



Name _____

L1 **

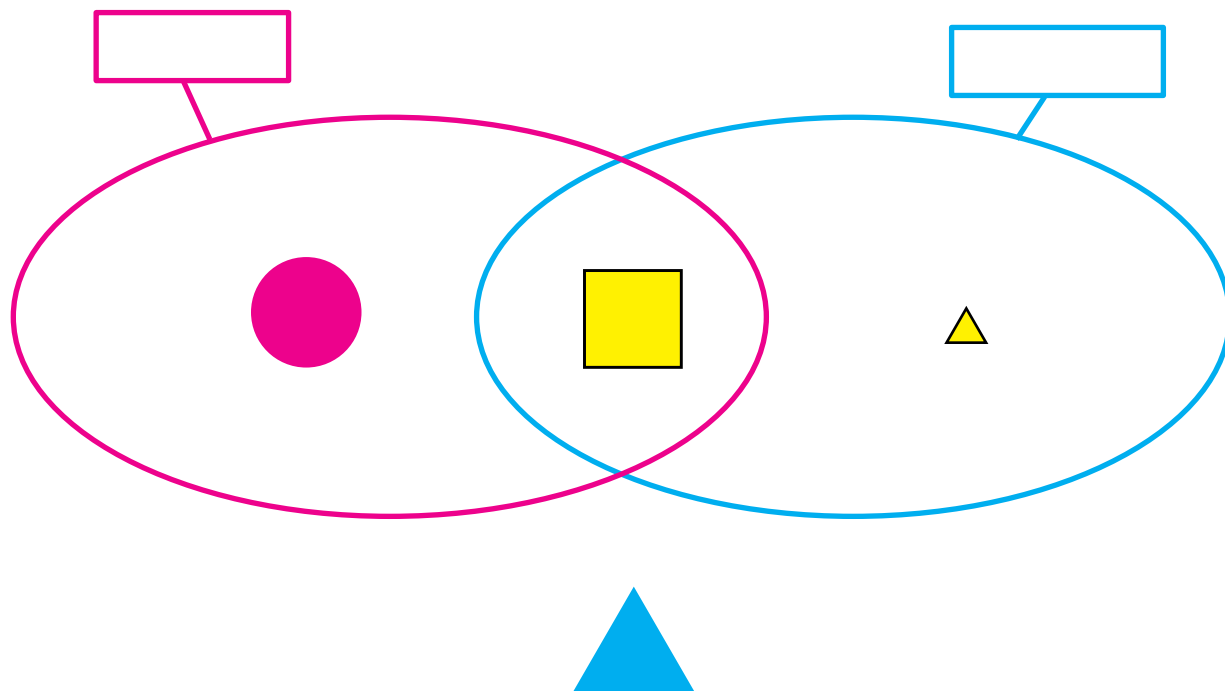
The red string is one of these:

The blue string is one of these:

RED	YELLOW	GREEN	BLUE
NOT RED	NOT YELLOW	NOT GREEN	NOT BLUE
○	△	□	BIG
NOT ○	NOT △	NOT □	LITTLE

RED	YELLOW	GREEN	BLUE
NOT RED	NOT YELLOW	NOT GREEN	NOT BLUE
○	△	□	BIG
NOT ○	NOT △	NOT □	LITTLE

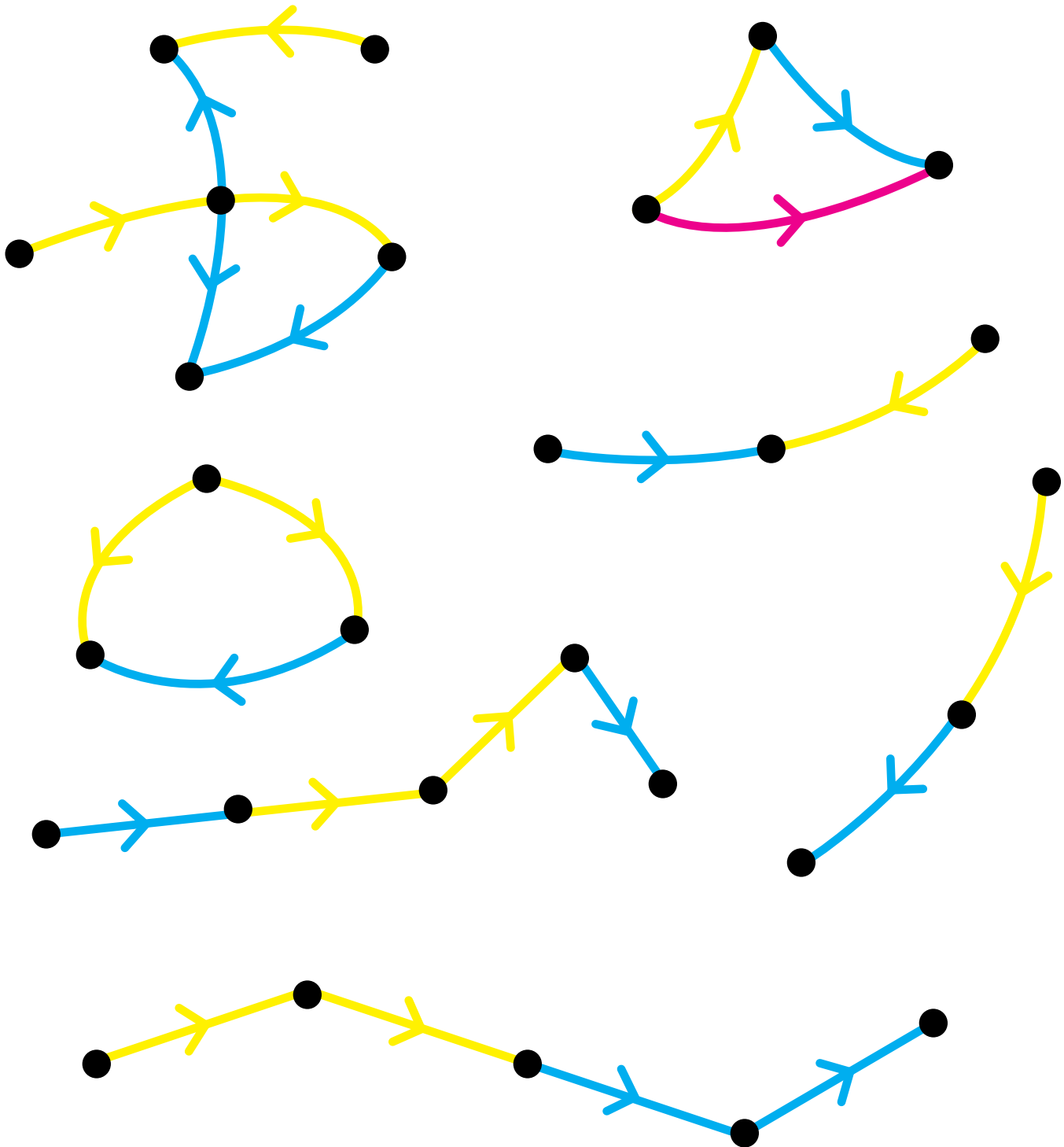
Give the strings correct labels.



Name _____

L2 *

Draw red arrows following this rule:
Yellow followed by blue is red.

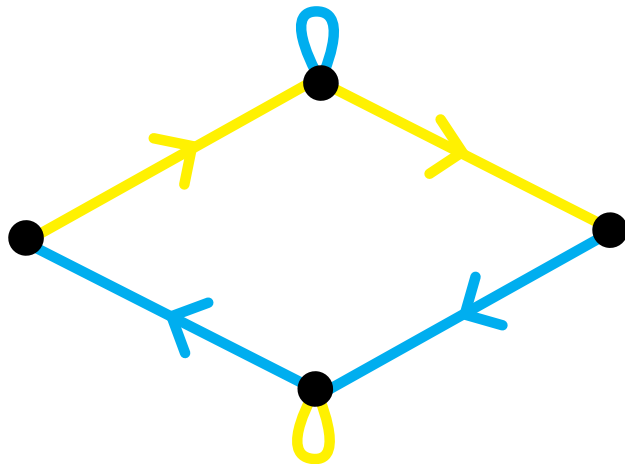
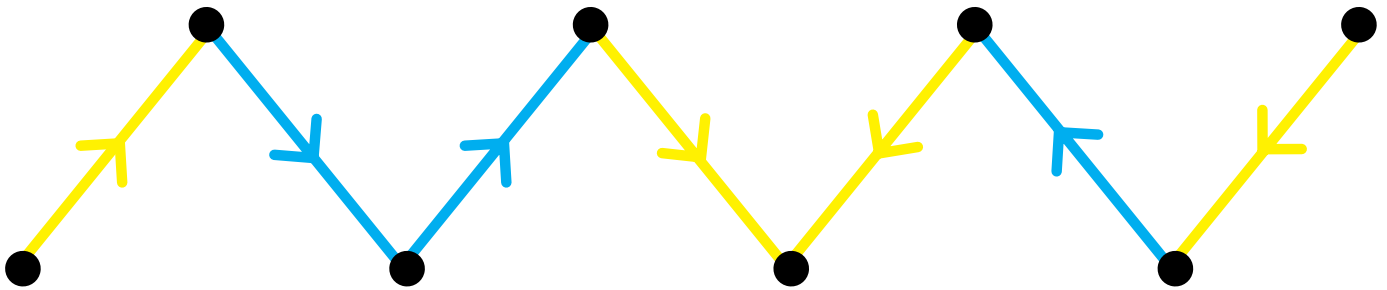
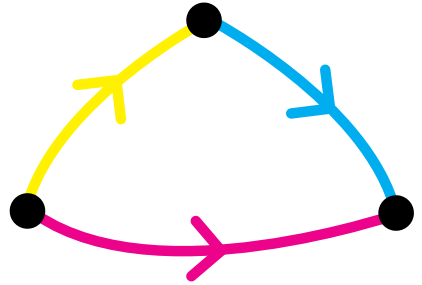
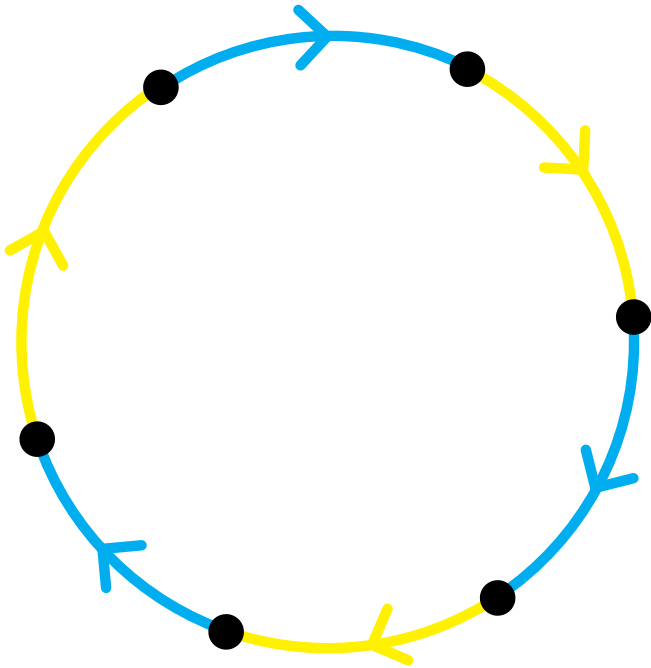


Name _____

L2 **

Draw red arrows following this rule:

Yellow followed by blue is red.



Name _____

L2 ***

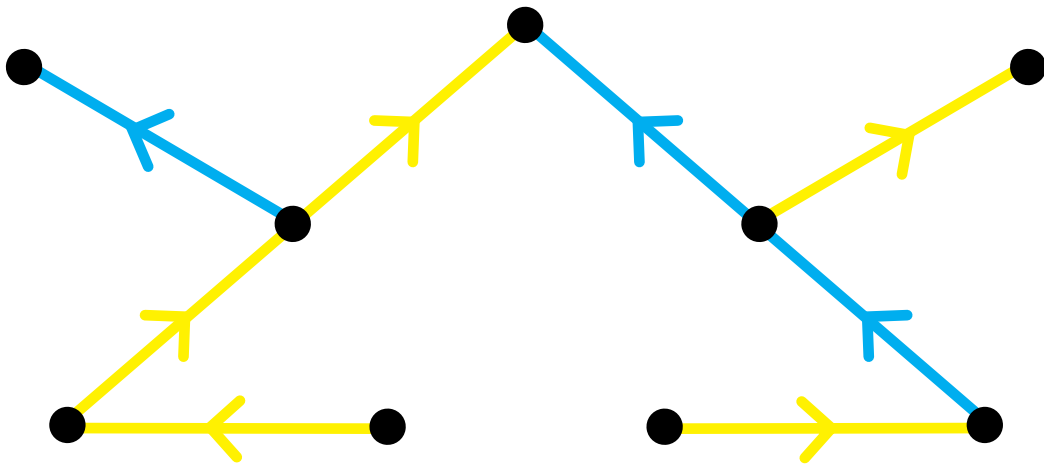
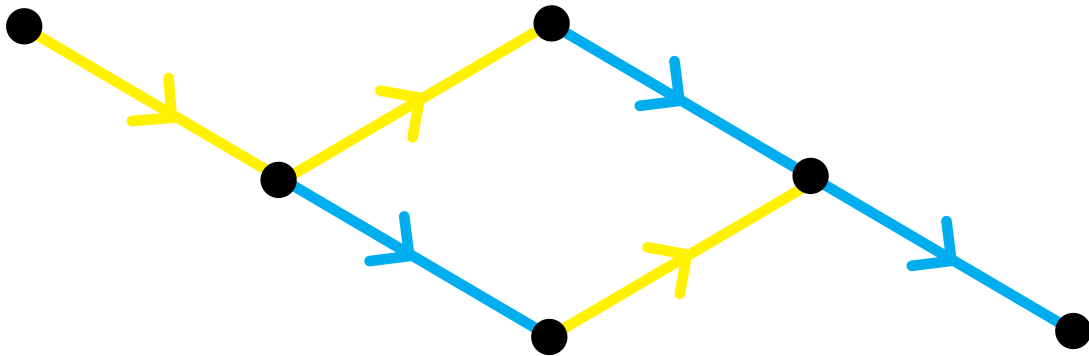
Draw as many red arrows and green arrows as possible.
Label the dots with numbers of your choice.

+9

-7

+2

+18



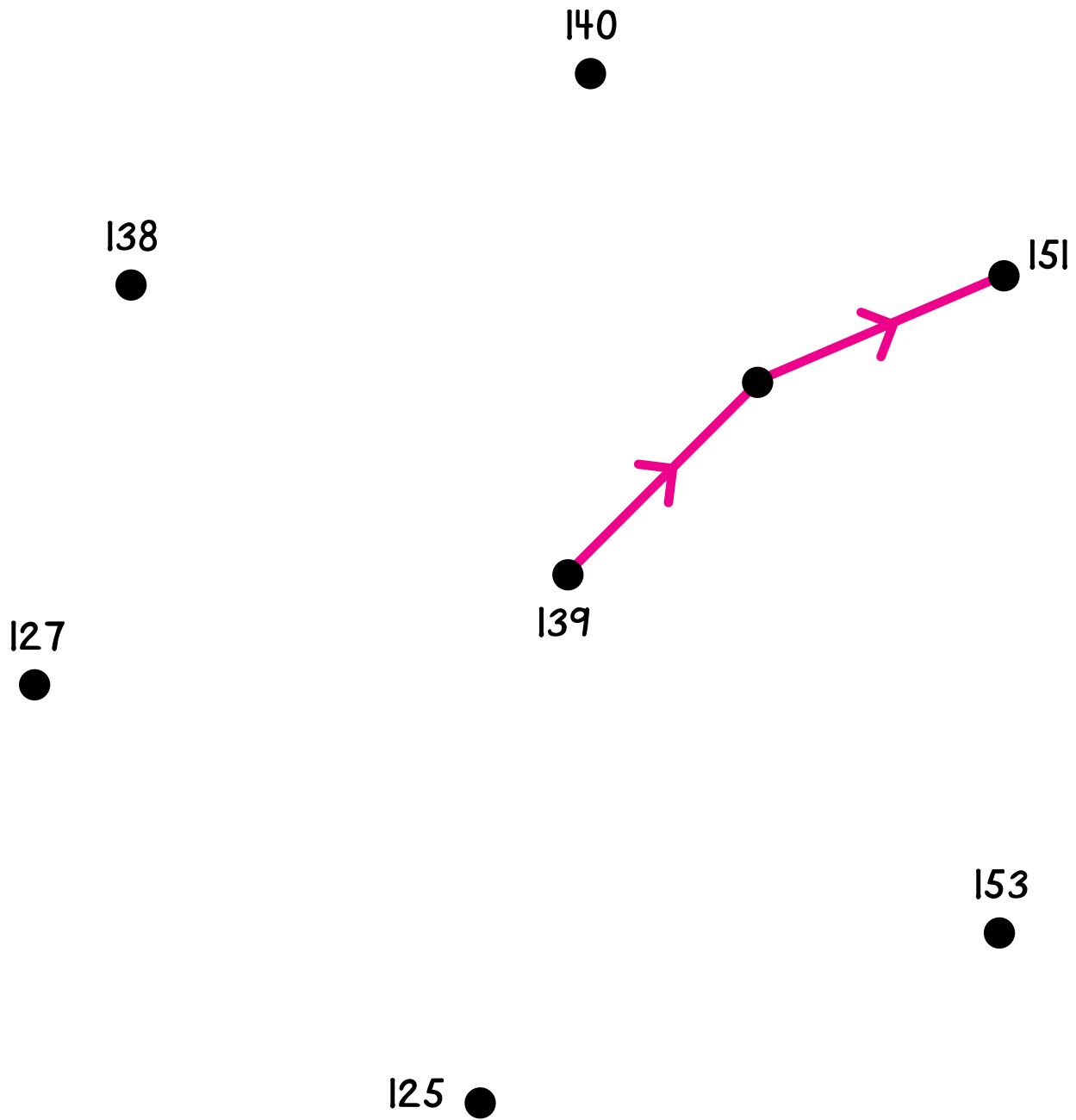
Name _____

L2 ****

Use exactly two arrows (red or blue) to connect 139 to each of the other numbers. One is done for you.

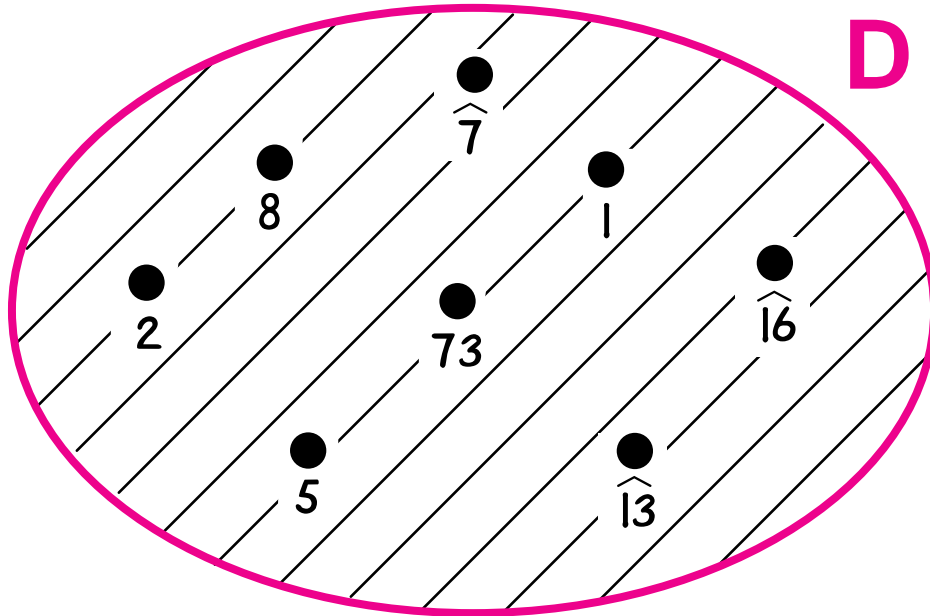
+6

-7



Name _____

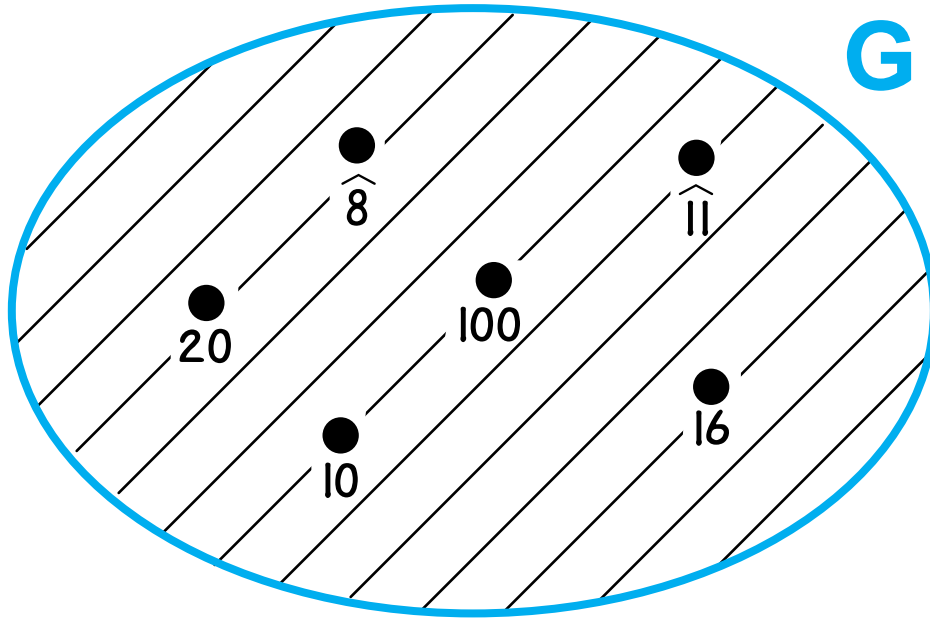
D is a set of exactly eight numbers. Below the string are some statements about D. Circle **T** if the statement is true and **F** if it is false.



- T F 1. No number in D is even.
- T F 2. All numbers in D are even.
- T F 3. At least two numbers in D are even.
- T F 4. At least three numbers in D are even.
- T F 5. At least four numbers in D are positive.
- T F 6. At most one number in D is even.
- T F 7. At most two numbers in D are even.

Name _____

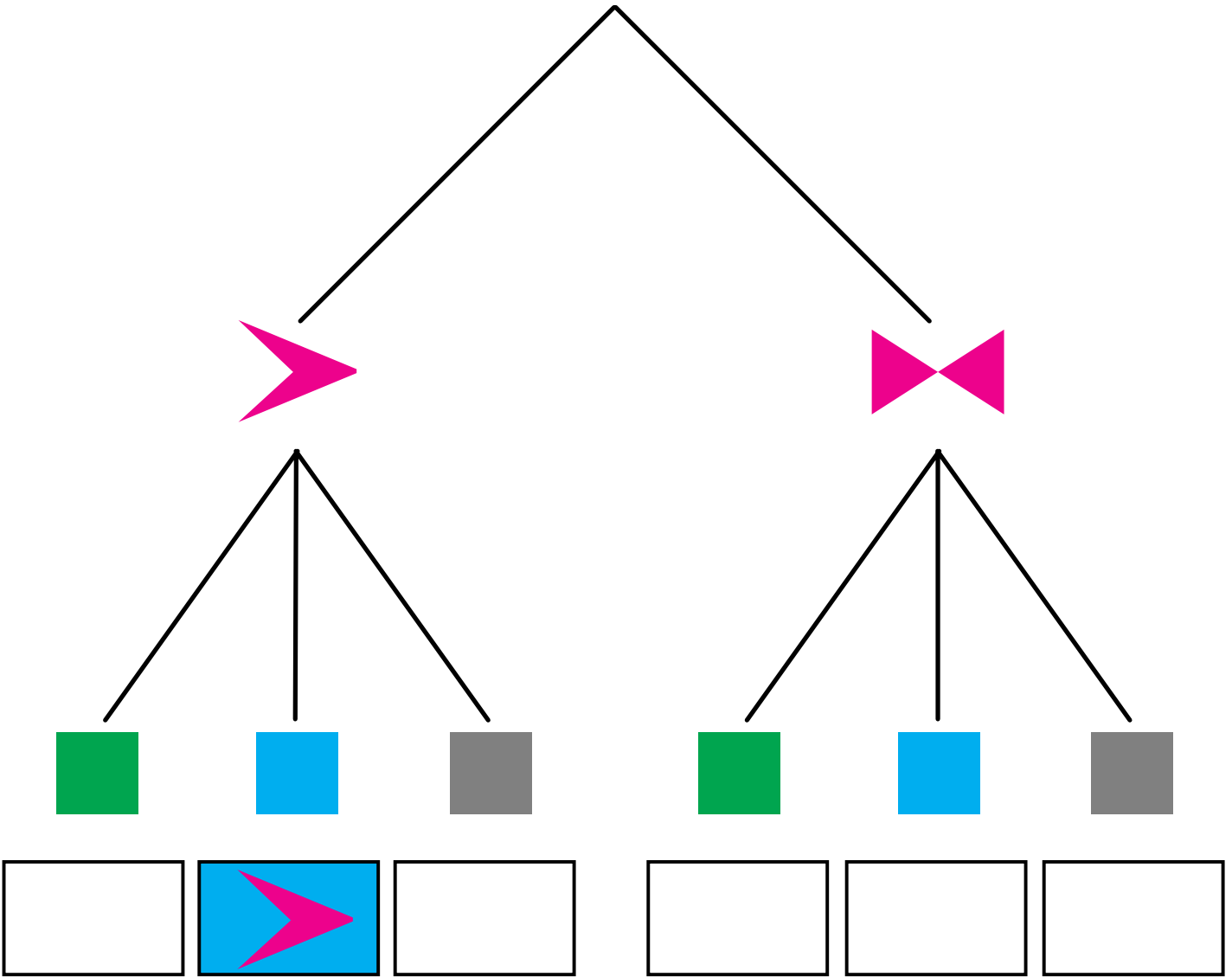
G is a set of exactly six numbers. Below the string are some statements about G. Circle **T** if the statement is true and **F** if it is false.



- T F 1. Each number in G is a multiple of 4.
- T F 2. No number in G is a multiple of 4.
- T F 3. At least one number in G is a multiple of 4.
- T F 4. At most one number in G is a multiple of 4.
- T F 5. Exactly four numbers in G are multiples of 4.
- T F 6. At least three numbers in G are negative.
- T F 7. At most three numbers in G are negative.
- T F 8. Every even number in G is a multiple of 4.

Name _____

Follow the paths in the tree and design a flag. You may choose from two shapes and three background colors. One is done for you.



How many different flags can be drawn? _____

Name _____

L7	**
----	----

Make an ice cream sundae. Choose one item from each column. How many different ice cream sundaes may be prepared by choosing one item from each column? _____
Use a tree diagram to help with the counting.

Ice Cream

- Chocolate
- Vanilla
- Strawberry

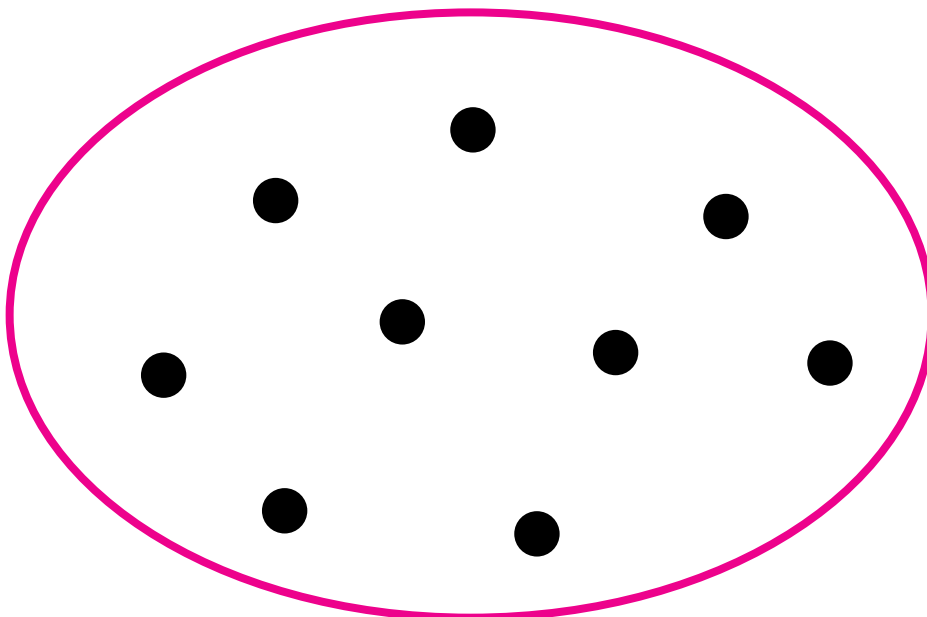
Syrup

- Pineapple
- Marshmallow

Nut Toppings

- Pecans
- Cashews
- Almonds

Name _____

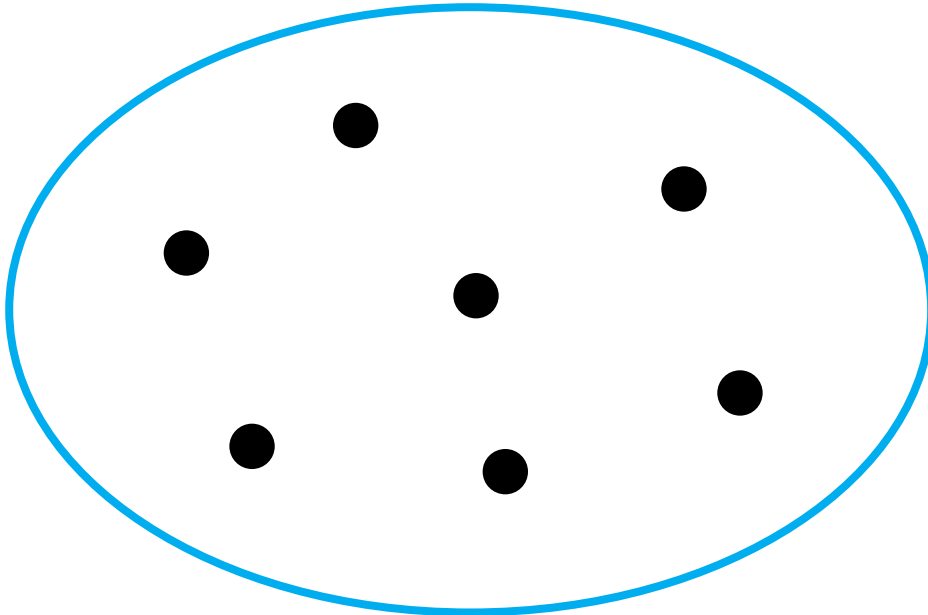


Label the nine dots in this string with numbers so that:

<p>All the numbers are even, and at least two of the numbers are negative, and at most one of the numbers is a multiple of 5.</p>

Name _____

L8 **



Label the seven dots in this string with numbers so that:

All the numbers are multiples of 3,
and
at most two of the numbers are greater than 7,
and
at least four of the numbers are odd.

Name _____

L8	***
----	-----

Allie, Brice, Guy, and Hanna each have a different favorite number. Their favorite numbers are:

22

12

6

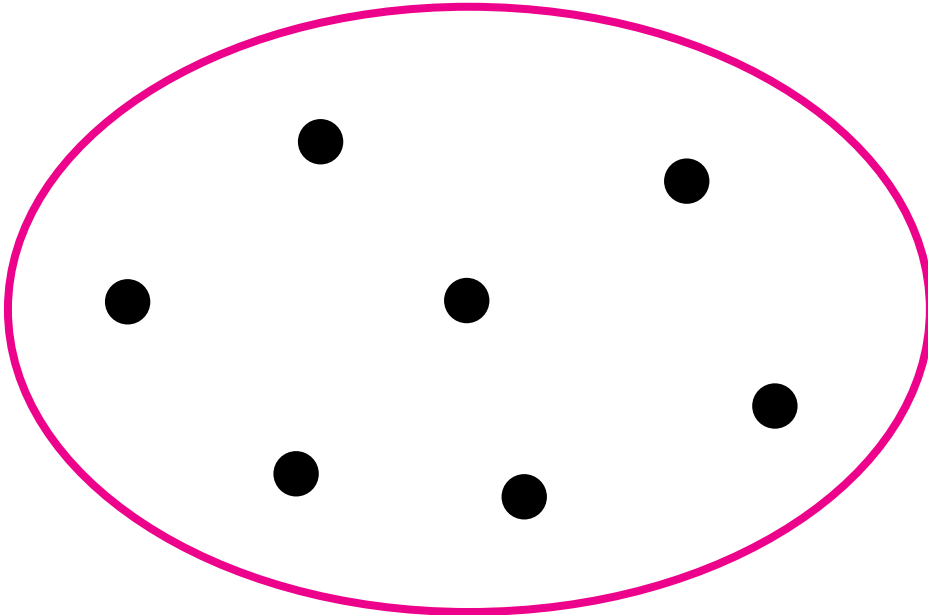
10

Use these clues to match the children with their favorite numbers.

- Allie's number is a multiple of 3.
- Brice's number is more than Allie's.
- Guy's number is less than one-half of Hanna's.

Name _____

L8 ****



Label the seven dots in this string with numbers so that:

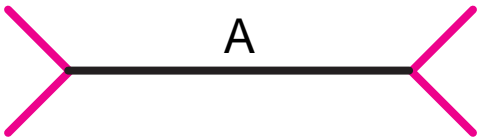
At least four of the numbers are multiples of 7,
and
at least five of the numbers are multiples of 3,
and
at most two of the numbers are even,
and
all the numbers are less than 22.

Name _____

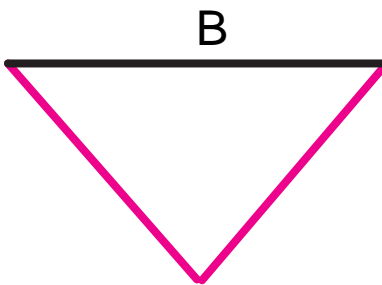
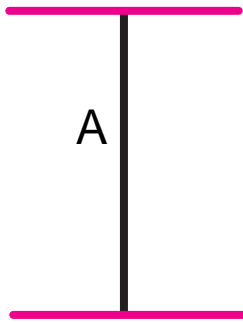
G1



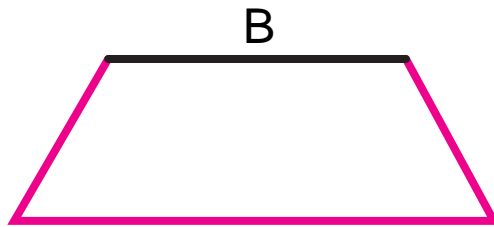
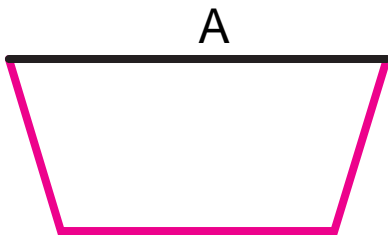
Circle the statement you think is true about the lengths of the two black line segments. Do not measure.



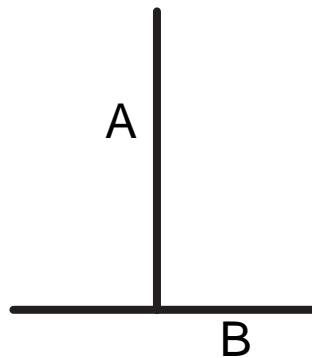
- A is longer than B.
 - A is the same length as B.
 - A is shorter than B.
-



- A is longer than B.
 - A is the same length as B.
 - A is shorter than B.
-



- A is longer than B.
 - A is the same length as B.
 - A is shorter than B.
-



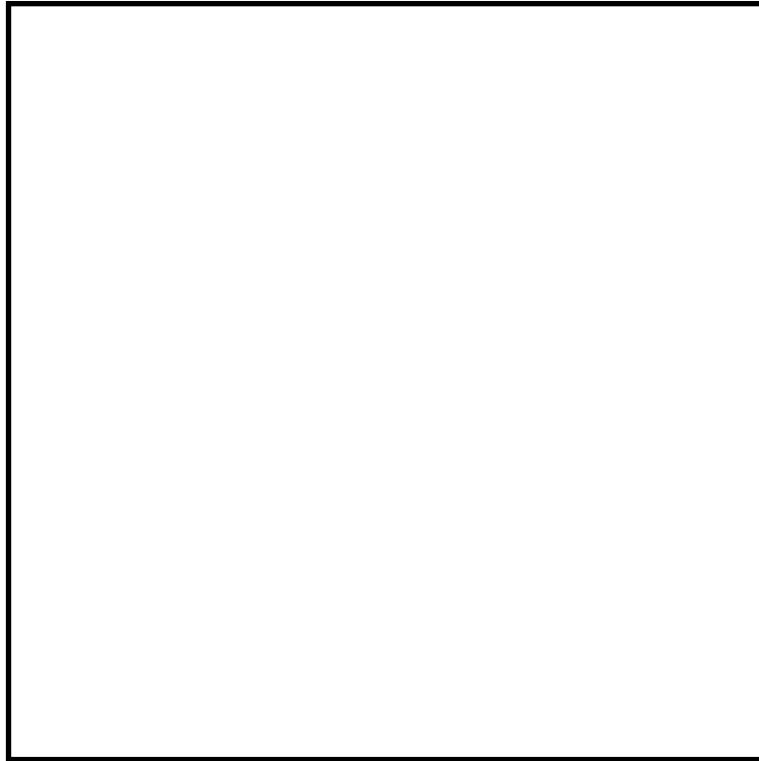
- A is longer than B.
- A is the same length as B.
- A is shorter than B.

Measure the black line segments to check if your guesses are correct.

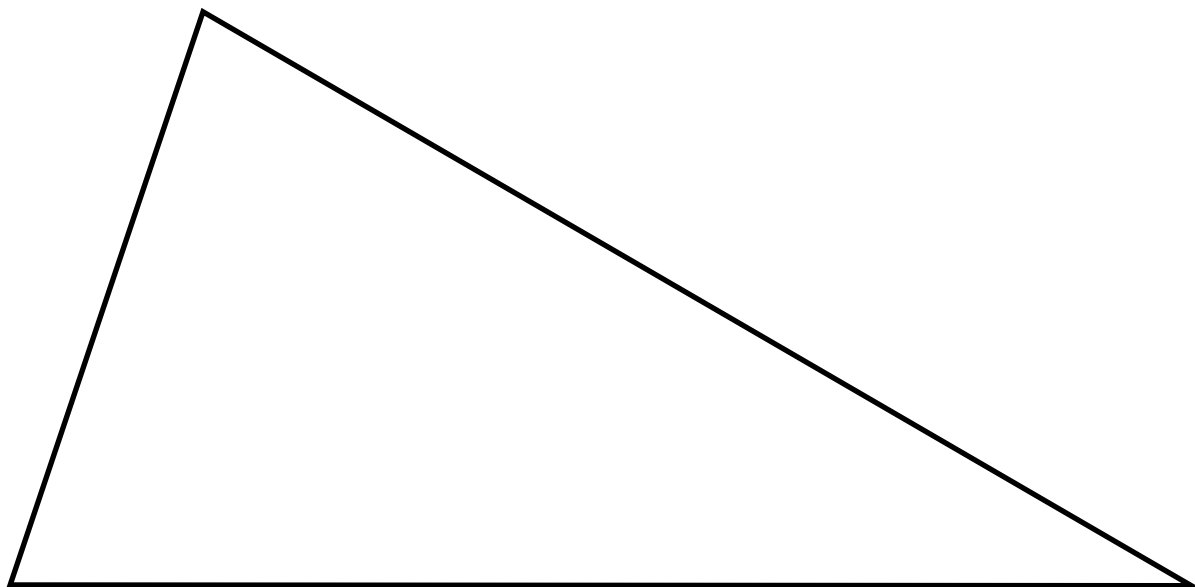
Name _____

G1 *

Inside the square draw a zigzag that is 40 cm long.



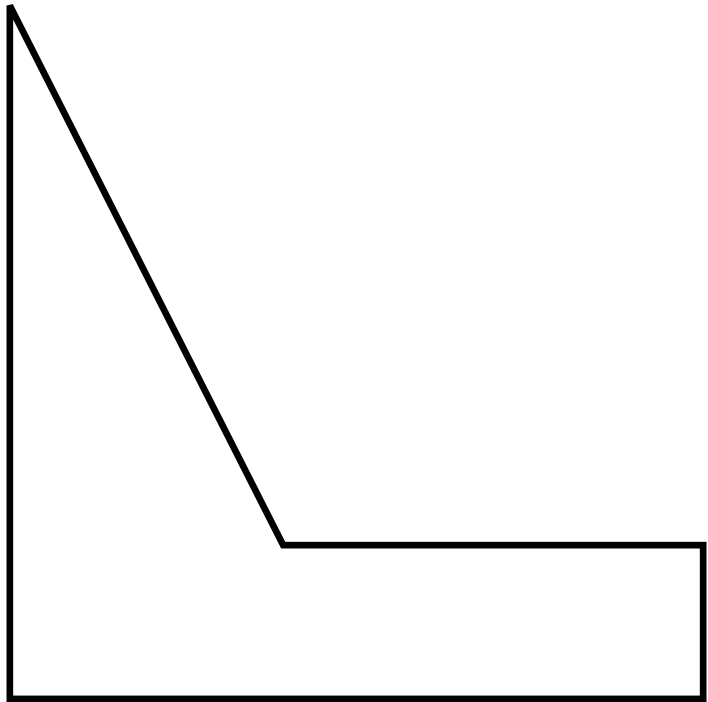
Inside the triangle draw a zigzag that is 40 cm long.



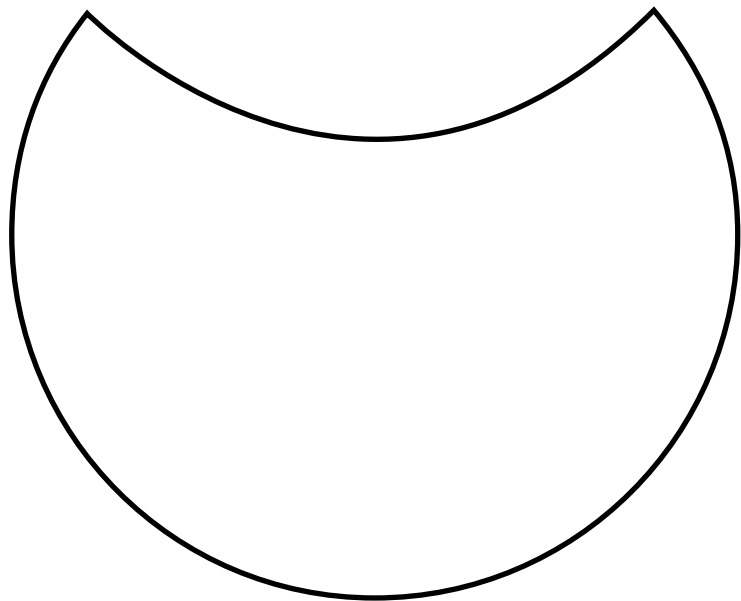
Name _____

G1 **

Inside the shape draw a zigzag that is 26 cm long.



Inside the shape draw a zigzag that is 36 cm long



Name _____

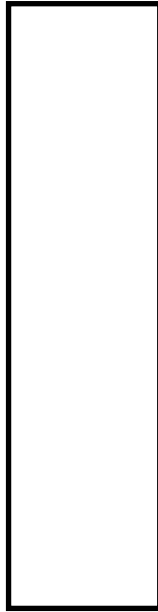
G3

What is the area of each shape?

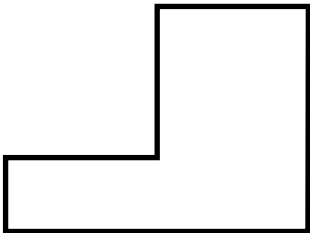
What is the perimeter of each shape?



Area ____ cm²
Perimeter ____ cm



Area ____ cm²
Perimeter ____ cm

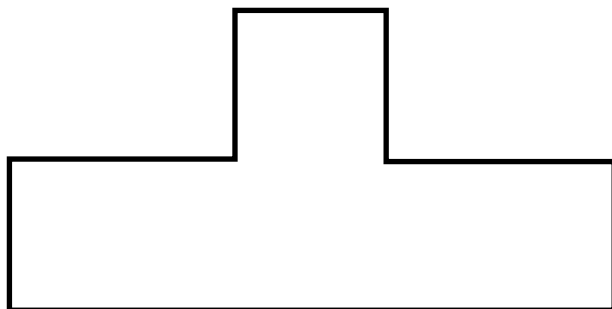


Area ____ cm²
Perimeter ____ cm

Area ____ cm²
Perimeter ____ cm



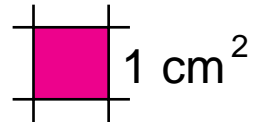
Area ____ cm²
Perimeter ____ cm



Area ____ cm²
Perimeter ____ cm

Name _____

On each grid draw a red shape with the area given.



area is 3 cm^2

area is 4 cm^2

area is 5 cm^2

area is 6 cm^2

area is 7 cm^2

area is 8 cm^2

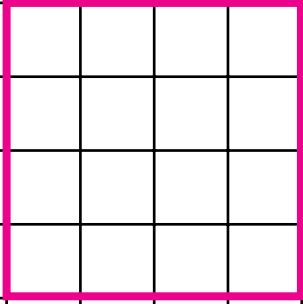
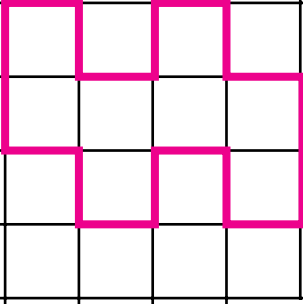
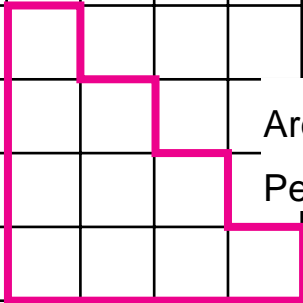
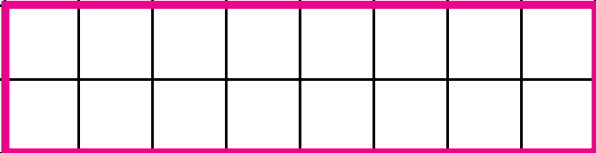
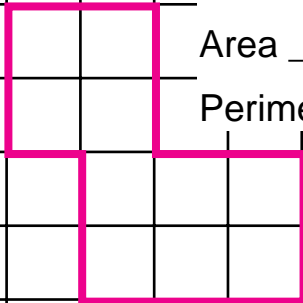
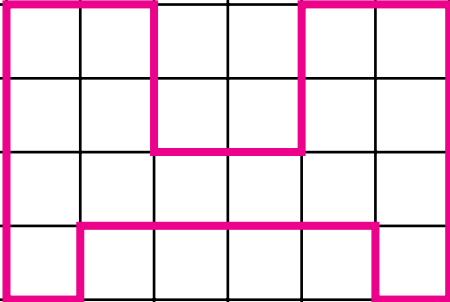
area is 9 cm^2

area is 12 cm^2

area is 14 cm^2

Name _____

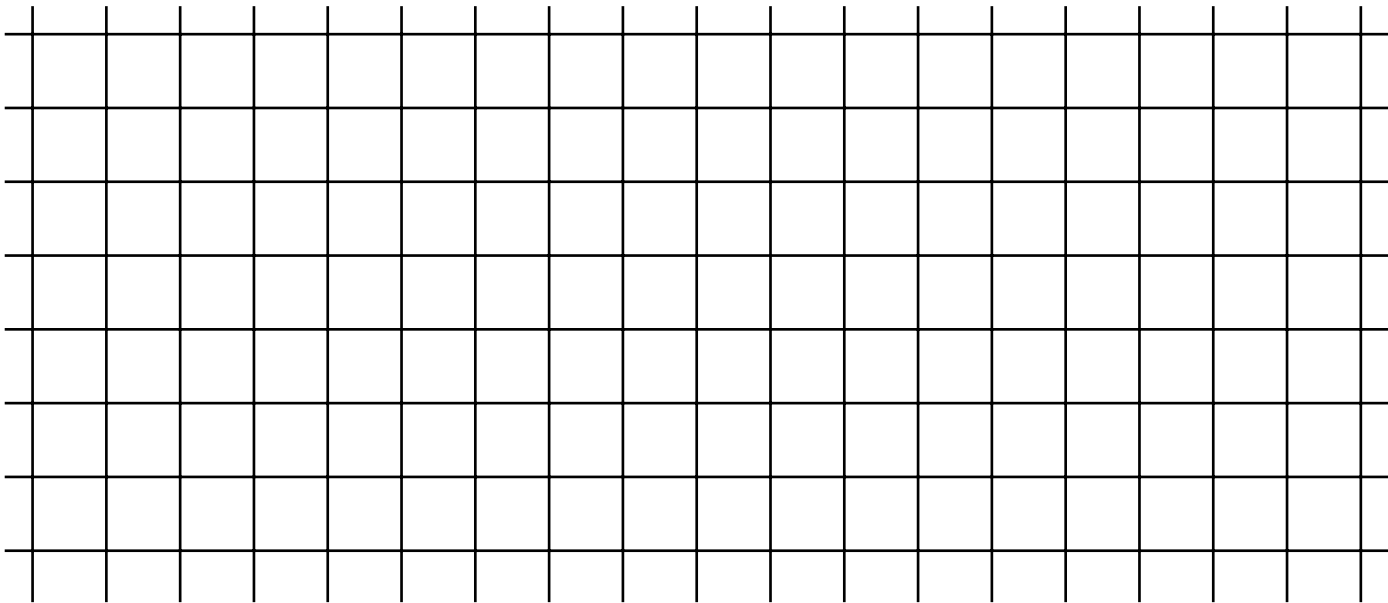
Find the area and perimeter of each shape.

		Area ____ cm ² Perimeter ____ cm
Area ____ cm ² Perimeter ____ cm	Area ____ cm ² Perimeter ____ cm	
		Area ____ cm ² Perimeter ____ cm
Area ____ cm ² Perimeter ____ cm		
		Area ____ cm ² Perimeter ____ cm
	Area ____ cm ² Perimeter ____ cm	

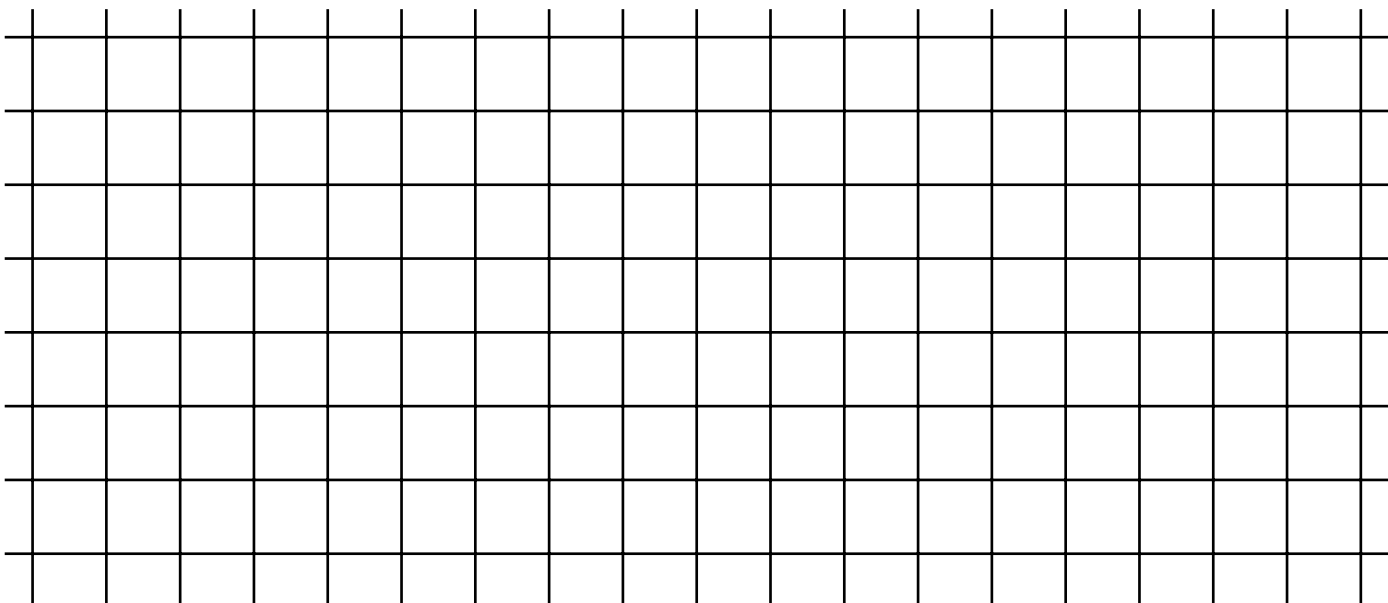
Name _____

G3 ***

Draw two shapes, each with an area of 5 cm^2 and with the same perimeter. Record their perimeters next to them.



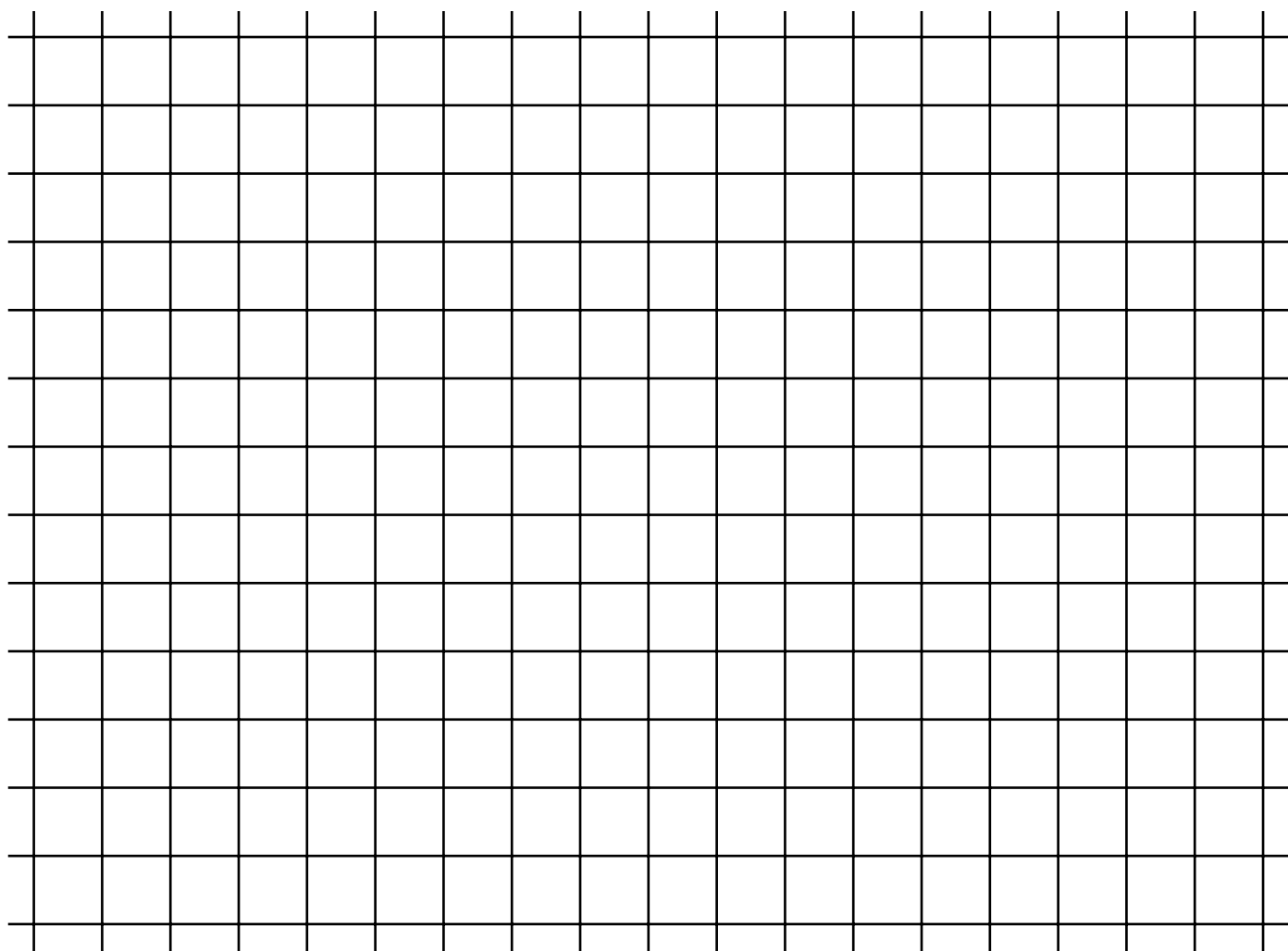
Draw two shapes, each with an area of 6 cm^2 but with different perimeters. Record their perimeters next to them.



Name _____

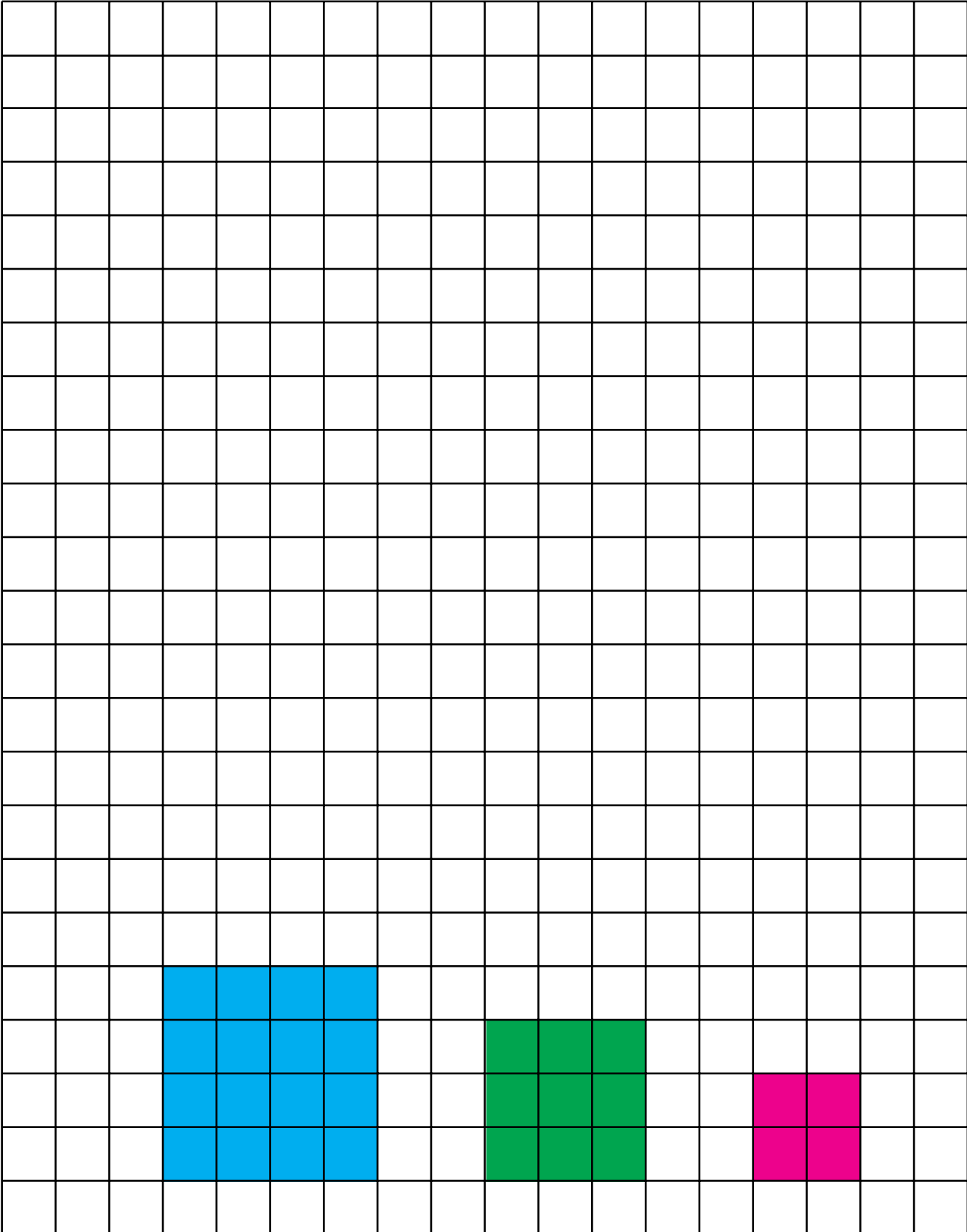
G3 ****

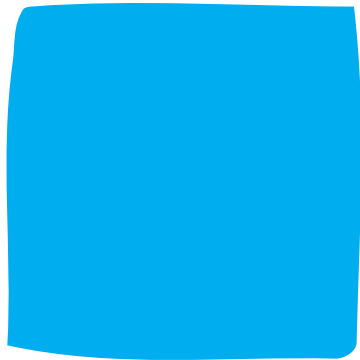
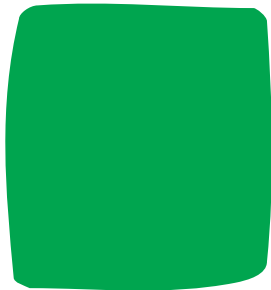
Draw two shapes with the same perimeter but with different areas. Record their areas and perimeters next to them.



Name _____

G4

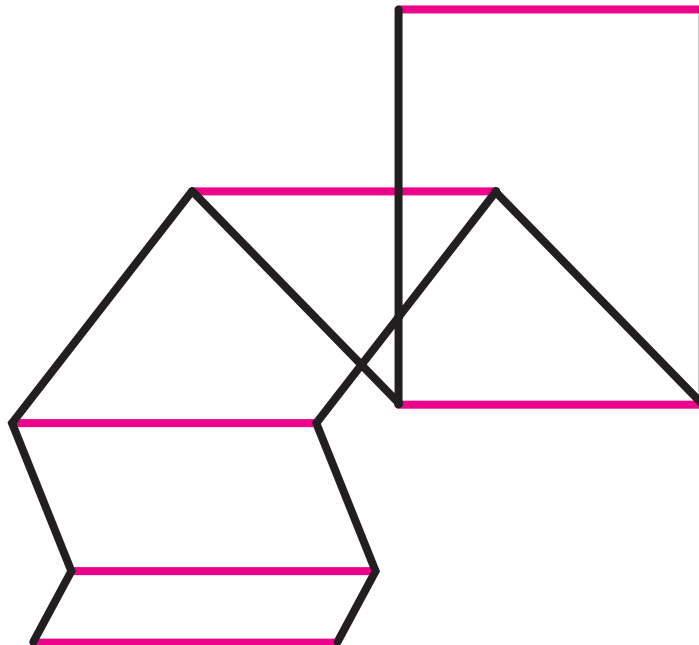




Name _____

G5 *

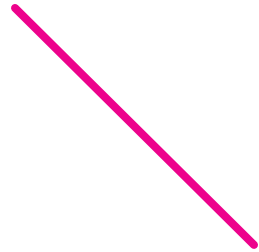
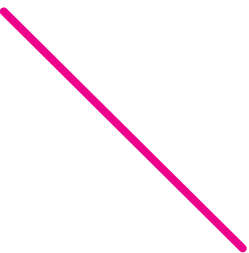
These parallelograms join the red line segments like the cars of a train. Use your translator to add at least six more red line segments and parallelograms to the train.



Name _____

G5	**
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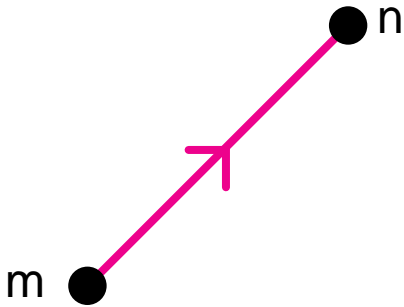
Draw a train with at least four parallelograms connecting the two red line segments.



Name _____

G6	*
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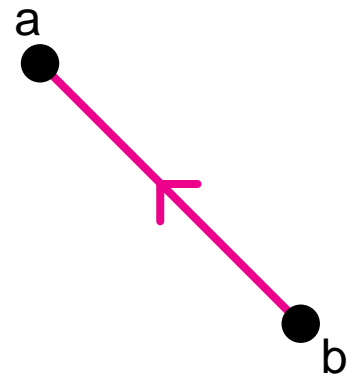
Build a parallelogram train. Use the red arrow as one side of your first parallelogram. Use red arrows to show couples equipollent to (m, n) . Draw at least six parallelograms.



Name _____

G6	**
----	----

Find four couples equipollent to (b, a) by building a parallelogram train.

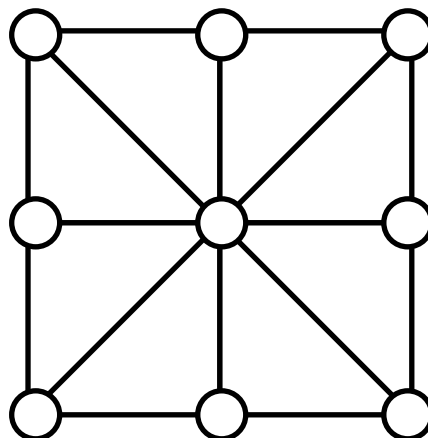
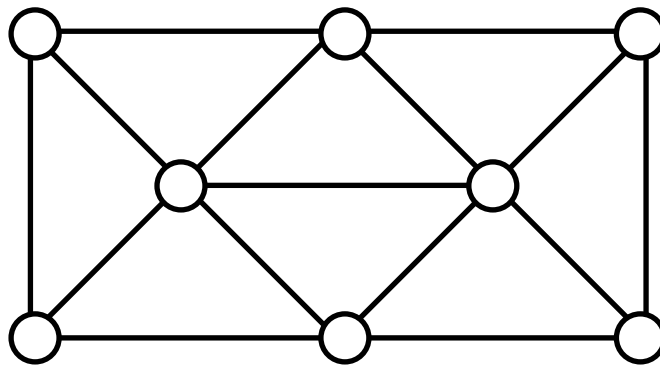
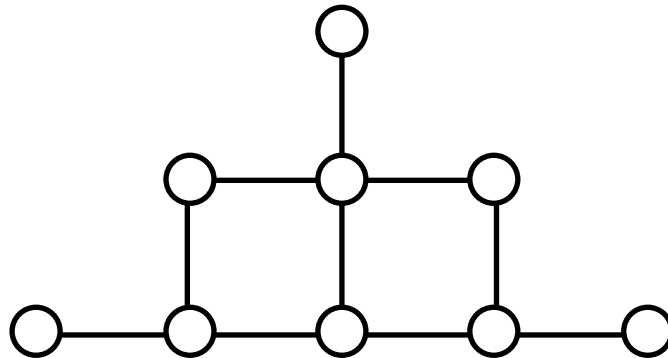


Name _____

G7(a)

Color these graphs. Follow the rule and use as few colors as possible.

Rule: Dots connected by an edge must be different colors.



Draw a graph with at least six dots that needs only two colors.

Draw a graph with at least six dots that needs three colors.

Draw a graph with at least six dots that needs four colors.

Name _____

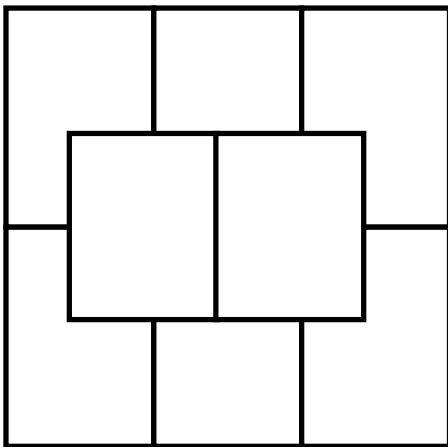
G7(b)

Color the maps. Follow the rule and use as few colors as possible. Draw and color the corresponding graph.

Rule: Countries sharing a border must be different colors.

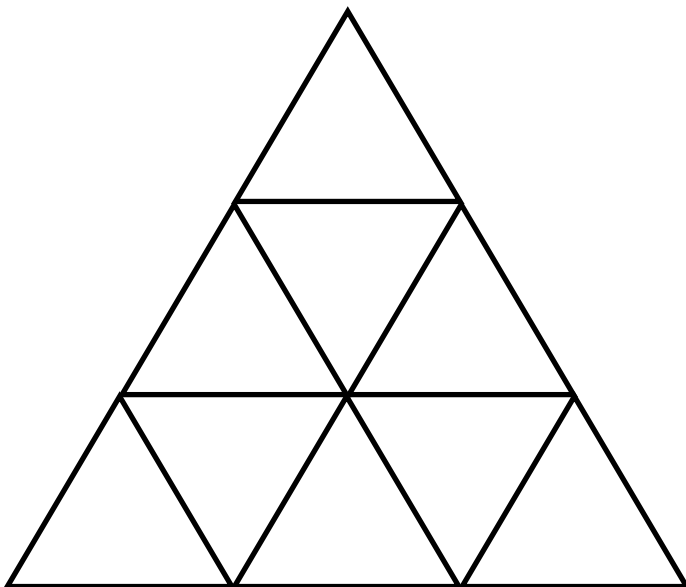
Map

Graph



Map

Graph

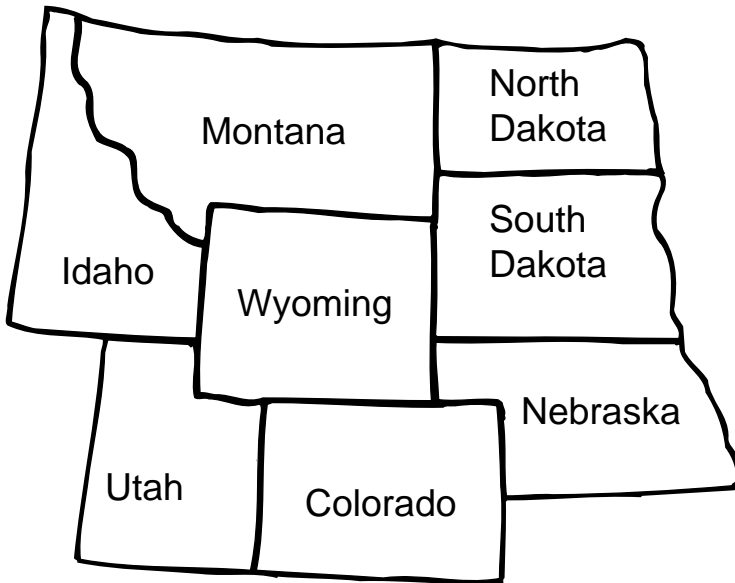


Color the maps. Follow the rule and use as few colors as possible. Draw and color the corresponding graph.

Rule: States or countries sharing a border must be different colors.

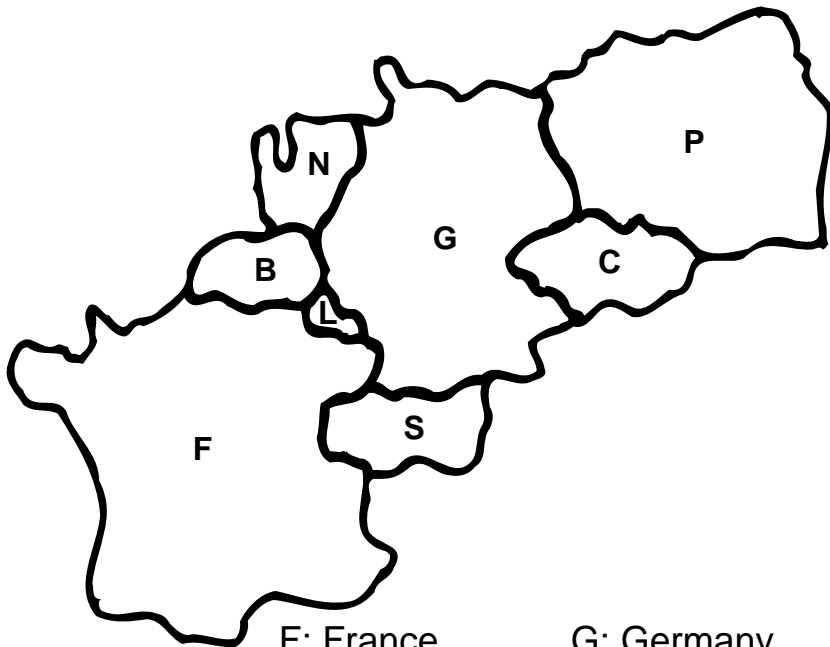
Map (part of United States)

Graph



Map (part of Europe)

Graph

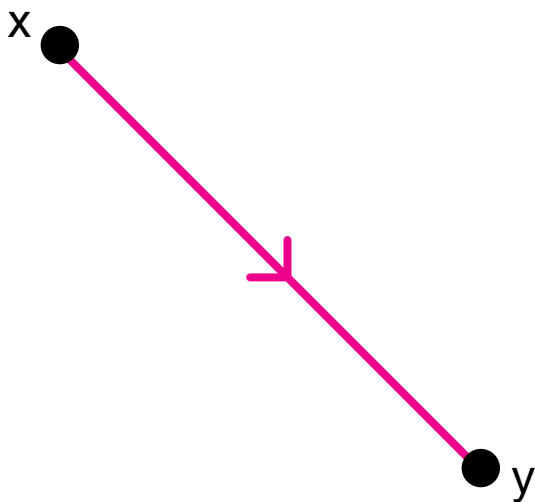


F: France	G: Germany
B: Belgium	S: Switzerland
N: Netherlands	C: Czechoslovakia
L: Luxembourg	P: Poland

Name _____

G8	*
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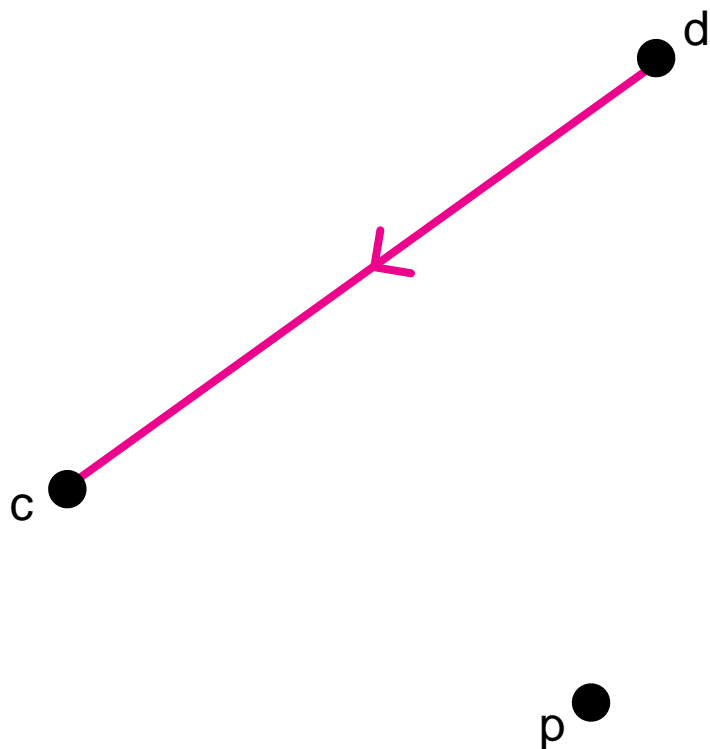
Find a point b so that (a, b) is equipollent to (x, y) .



Name _____

G8 **

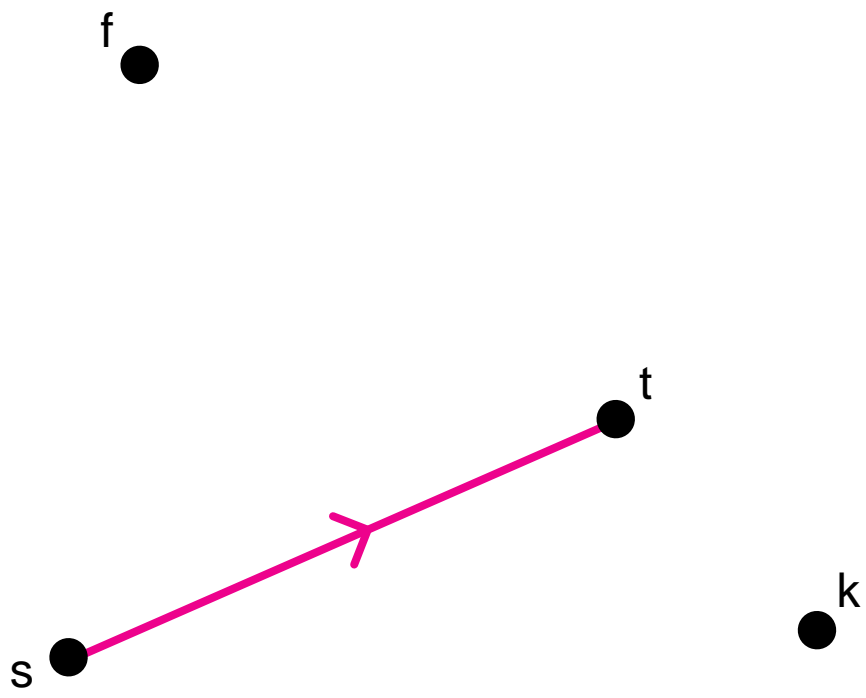
Find a point q so that (q, p) is equipollent to (d, c) .



Name _____

G8 ***

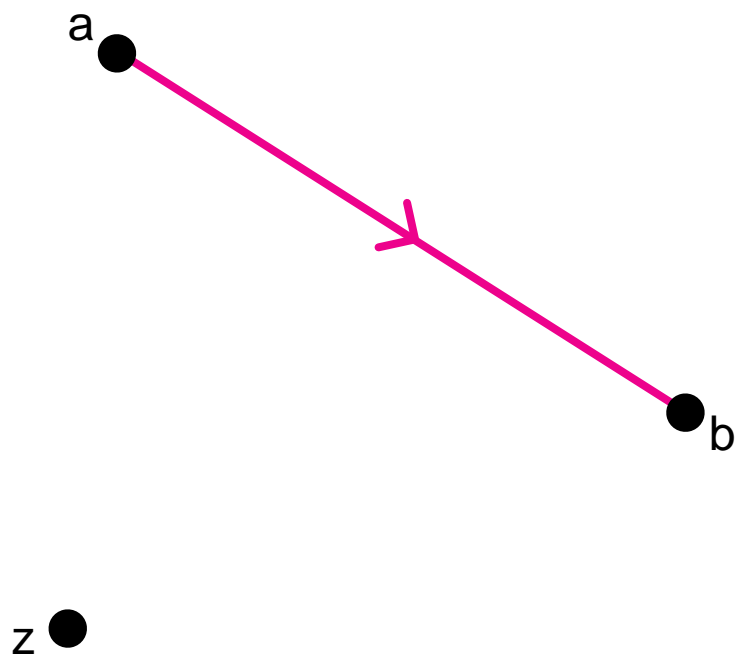
Find points g and j so that (f, g) and (j, k) are equipollent to (s, t) .



Name _____

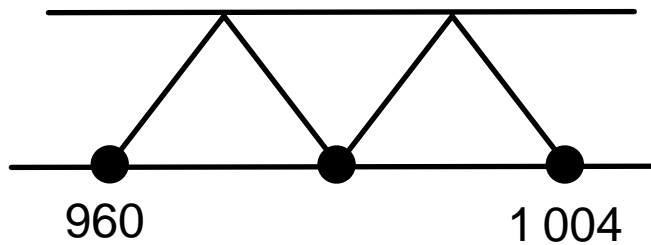
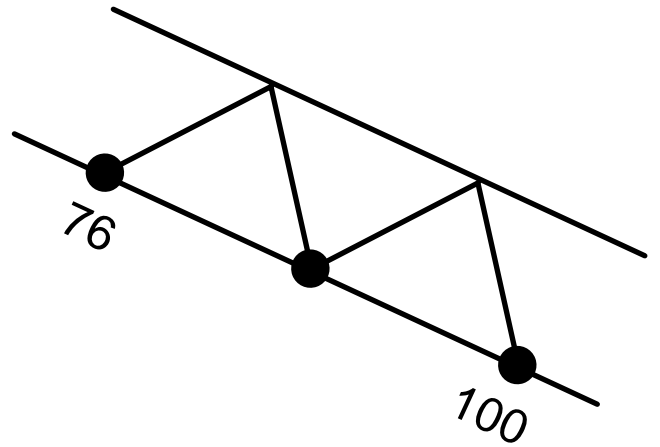
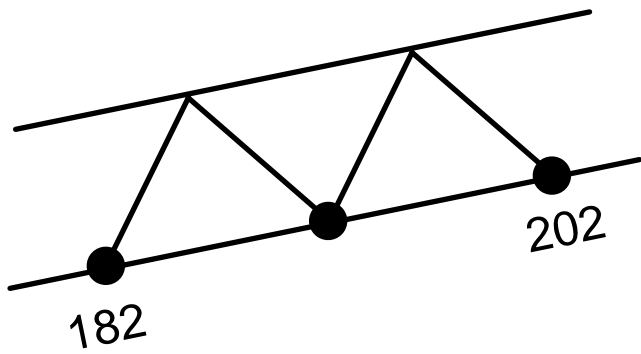
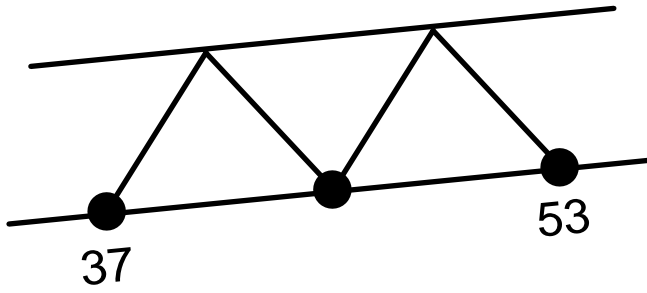
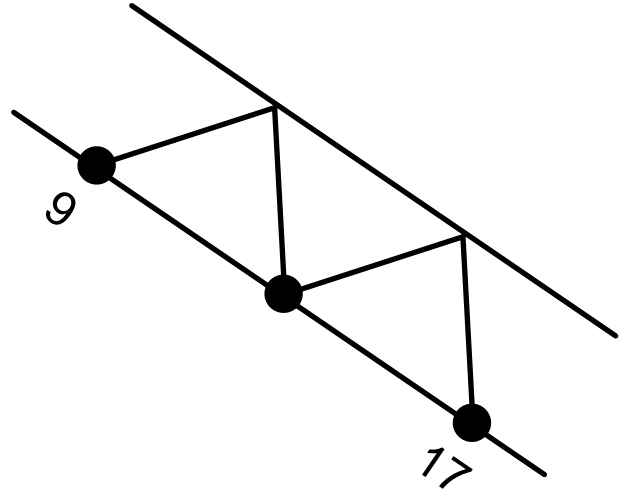
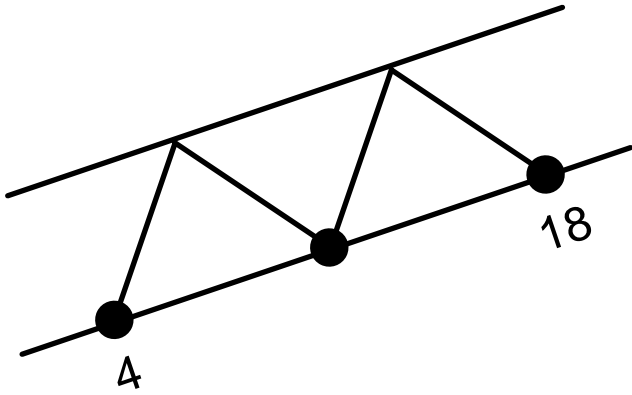
G8 *****

Find points x and y so that (x, z) and (z, y) are equipollent to (a, b) .



Name _____

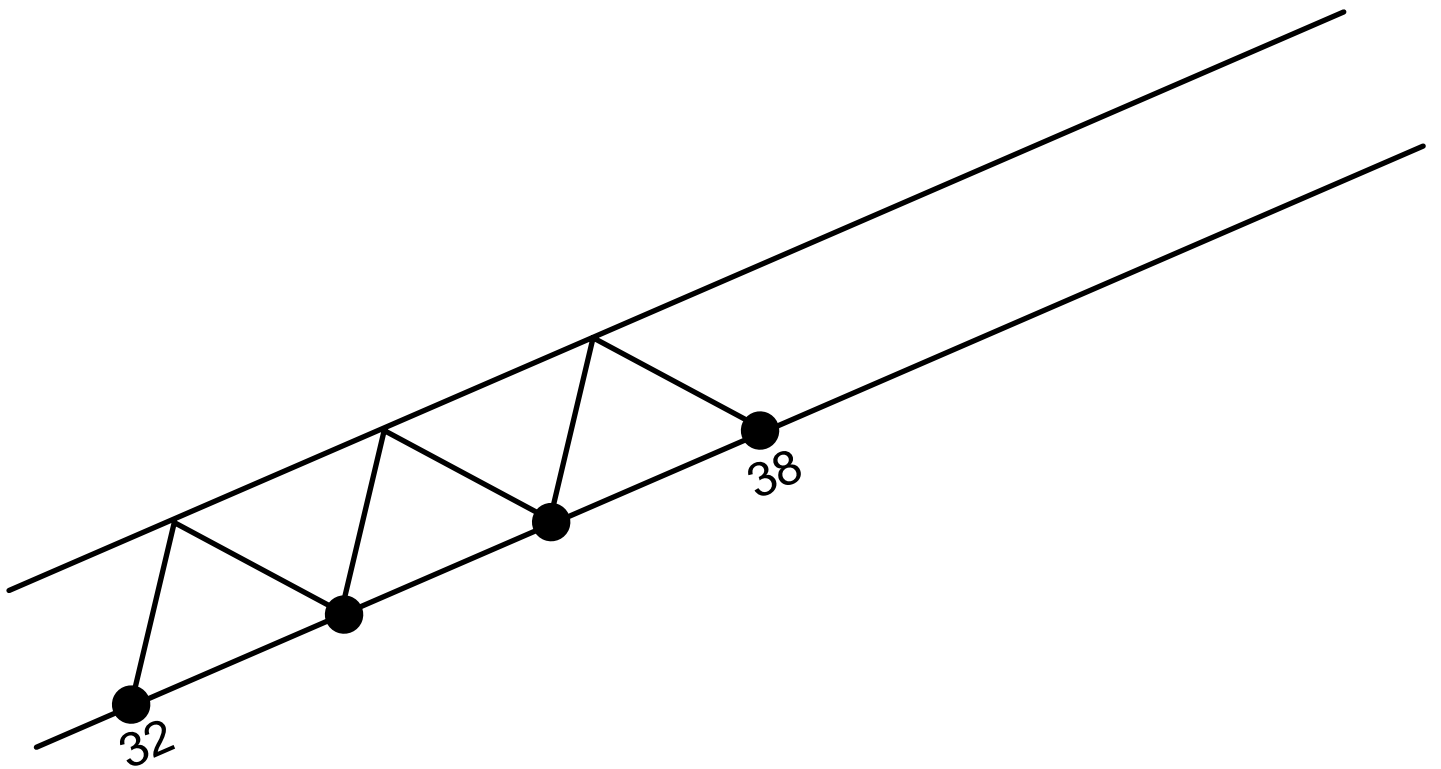
Label the dots.



Name _____

G9 **

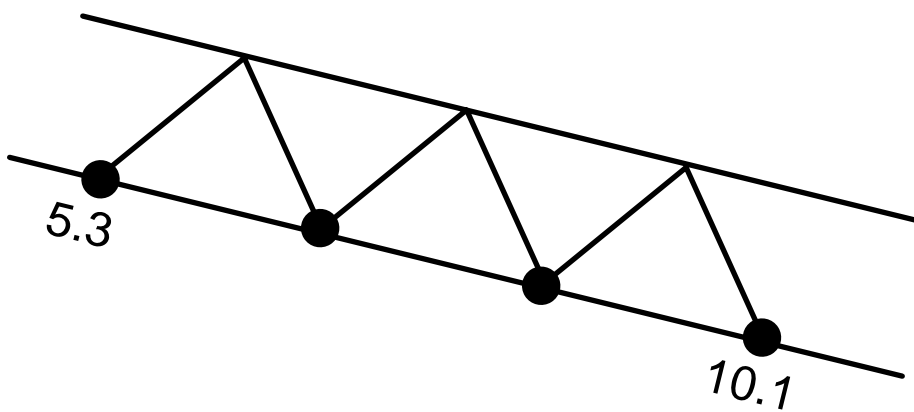
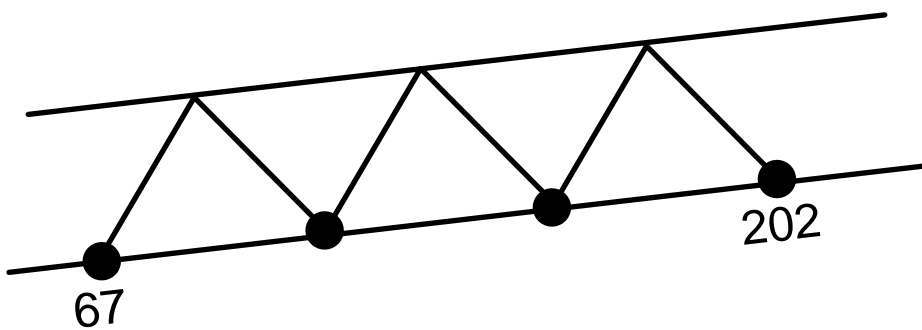
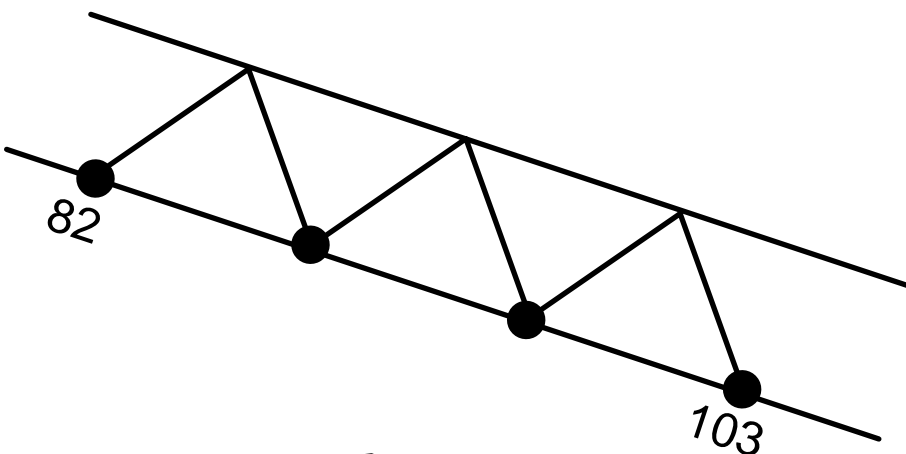
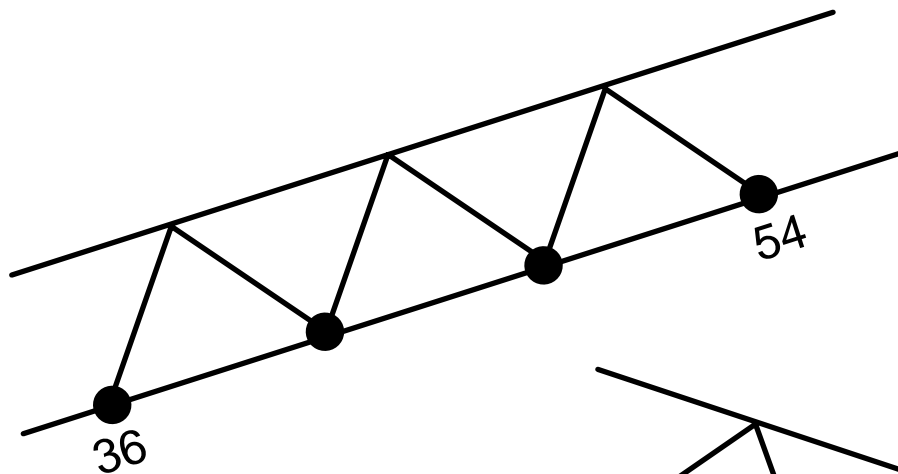
Label the dots. Use your translator to place a dot correctly for 44.



Name _____

G9 ***

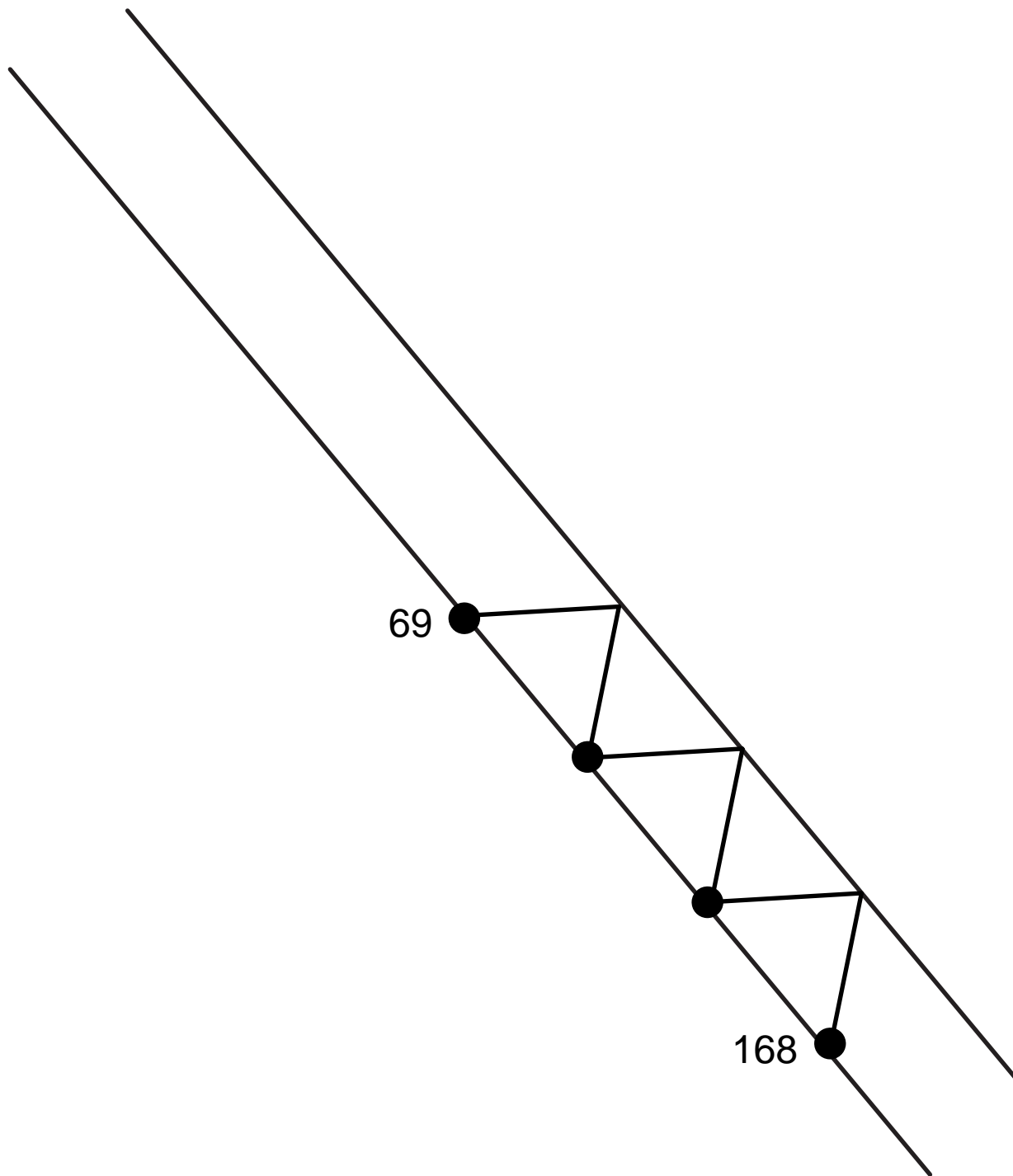
Label the dots.



Name _____

G9 *****

Label the dots. Use your translator to place a dot correctly for $\widehat{30}$.



Name _____

Find the area of each shape.

The grid contains the following shapes and their area labels:

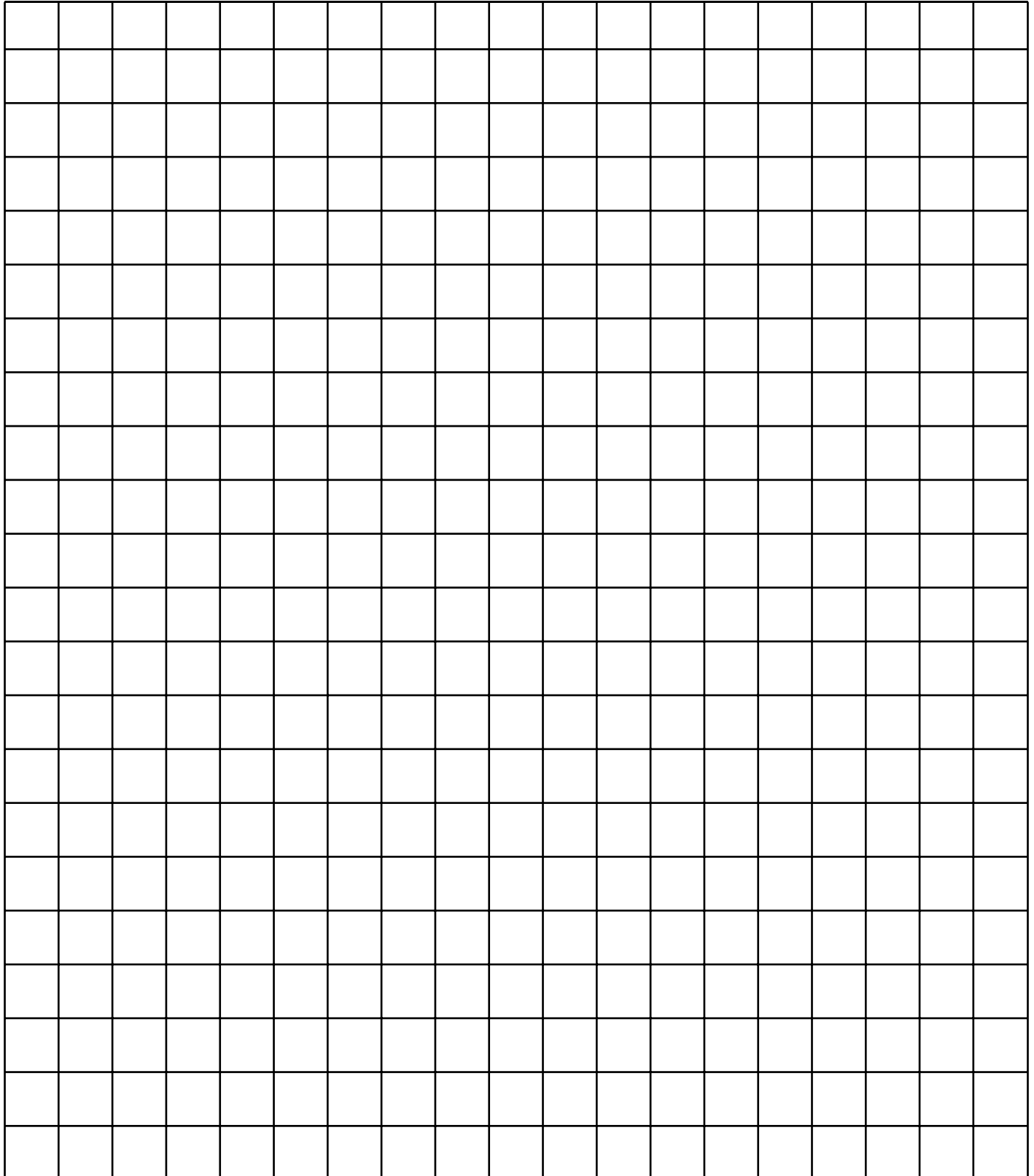
- Top Left:** A shape with a vertical left side of 3 units, a horizontal bottom side of 3 units, a vertical right side of 1 unit, and a diagonal top side from (1, 2) to (3, 3). Area label: Area ____ cm²
- Top Right:** A house-shaped polygon with a horizontal base of 3 units, vertical sides of 2 units, and a triangular roof with a base of 2 units and a height of 1 unit. Area label: Area ____ cm²
- Middle Left:** A shape with a horizontal top side of 2 units, a vertical left side of 1 unit, a horizontal bottom side of 2 units, a vertical right side of 1 unit, and two diagonal sides connecting the corners. Area label: Area ____ cm²
- Middle Right:** A complex shape with a horizontal top side of 2 units, a vertical right side of 2 units, a horizontal bottom side of 2 units, a vertical left side of 1 unit, and two diagonal sides. Area label: Area ____ cm²
- Bottom Left:** A horizontal shape with a total width of 5 units and a height of 2 units, with slanted sides on the left and right. Area label: Area ____ cm²
- Bottom Right:** A complex shape consisting of a large outer boundary and a smaller inner square hole. Area label: Area ____ cm²

A reference square of 1 unit by 1 unit is located in the top right, labeled 1cm².

Name _____

Draw five red shapes with these areas:

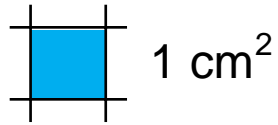
$$7 \frac{1}{2} \text{ cm}^2, \quad 8 \text{ cm}^2, \quad 9 \frac{1}{2} \text{ cm}^2, \quad 10 \text{ cm}^2, \quad 12 \frac{1}{2} \text{ cm}^2$$



Name _____

G10 * * * *

On each grid draw a blue square with the area given.



area is 4 cm²

area is 9 cm²

area is 16 cm²

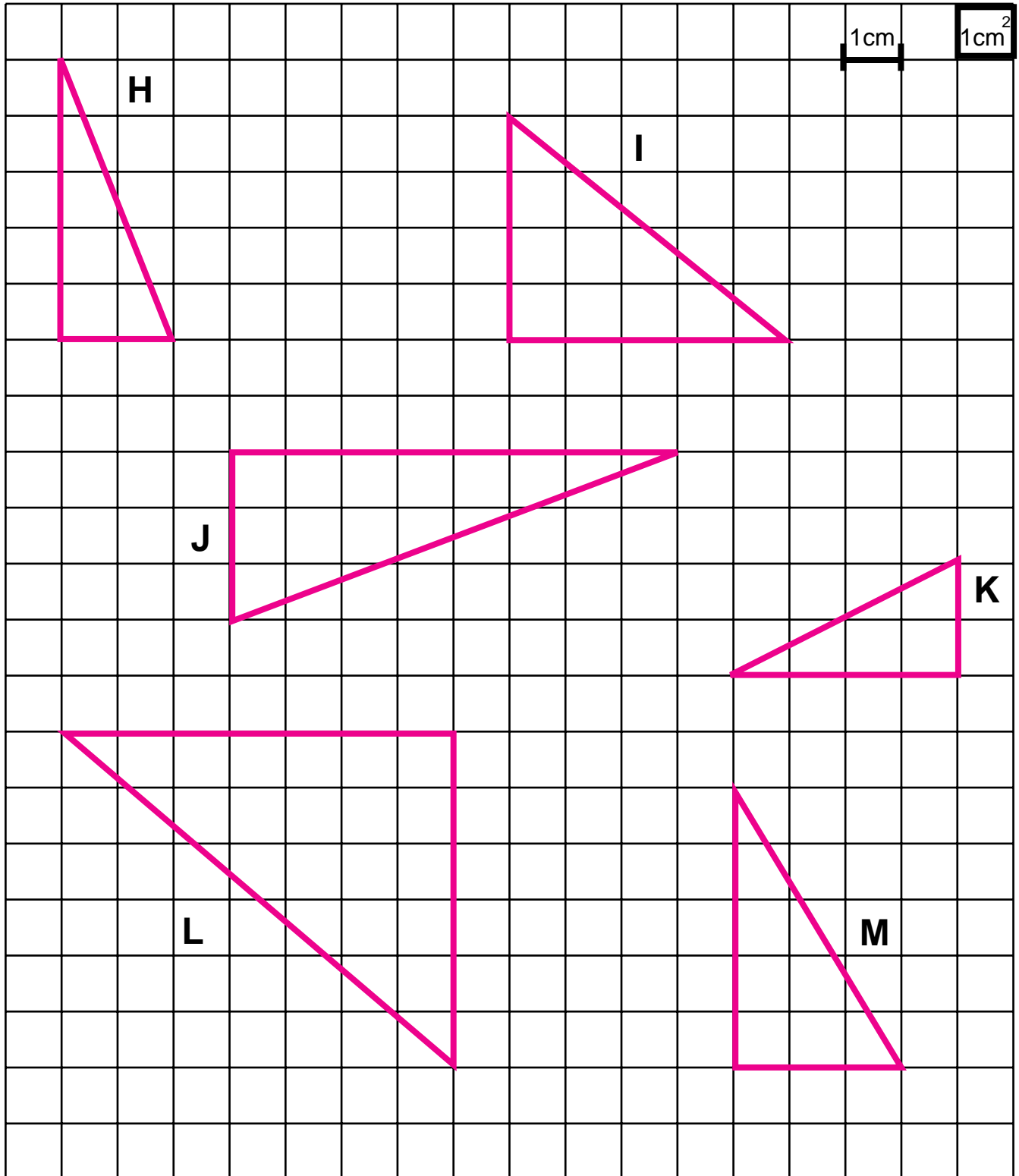
area is 2 cm²

area is 8 cm²

Name _____

G11

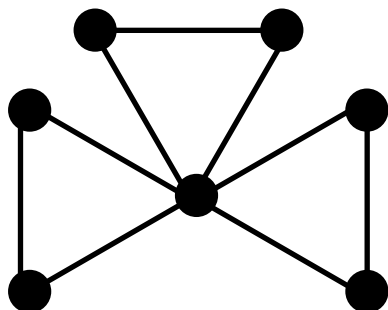
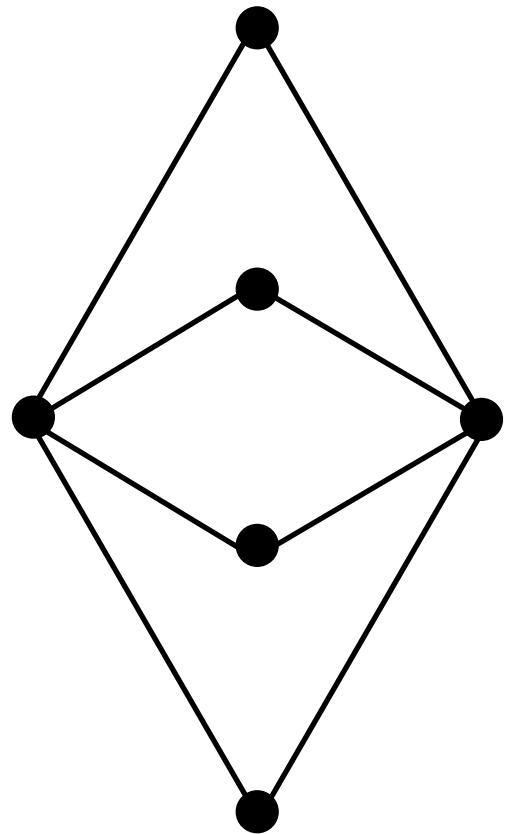
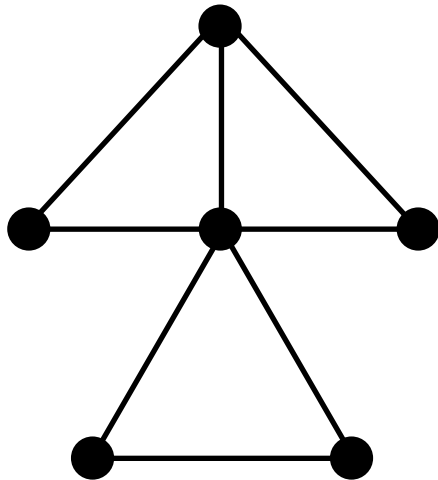
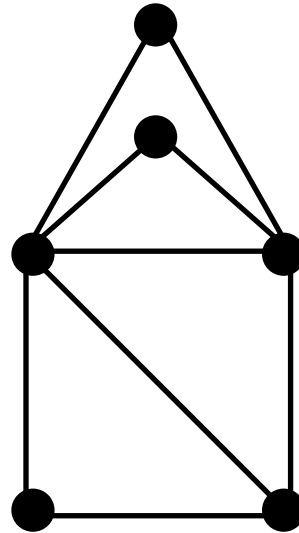
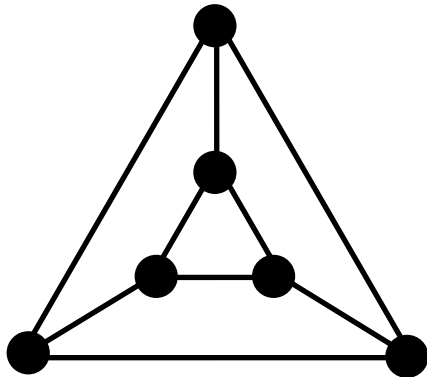
Use a blue pencil to draw a smallest rectangle that surrounds each triangle. Record the areas of the rectangles in blue, and the areas of the triangles in red.



Name _____

If possible,

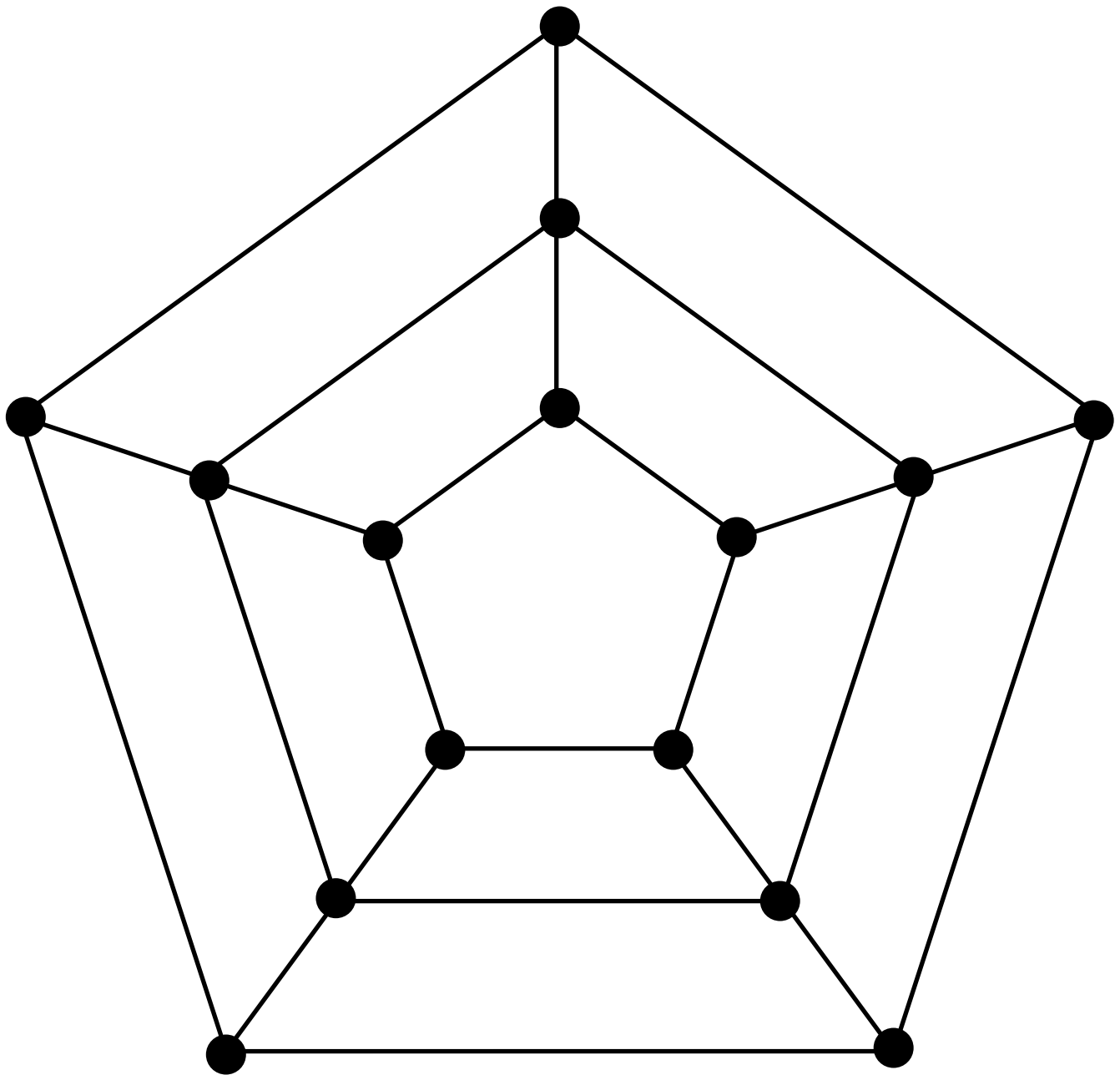
- find a route going to each town exactly once. Show it in blue.
- find a round trip going to each town exactly once. Show it in red.



Name _____

G12 **

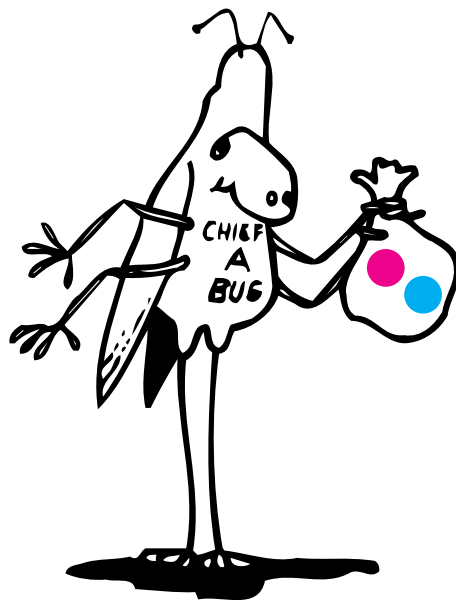
Try to find a round trip going to each town exactly once.
Show it in red.



Name _____

P1

A-BUGS ARE COMING!



In each case, about how many trees will lose their leaves and how many trees will survive? Make your best prediction.

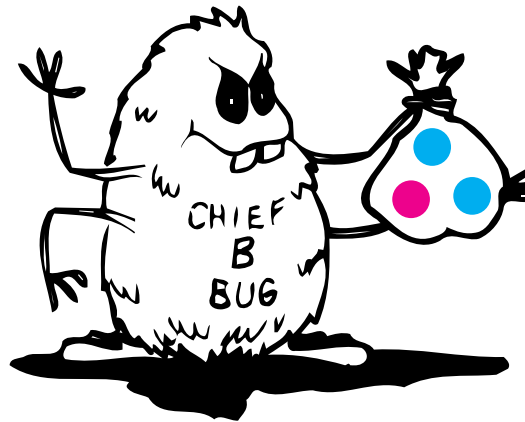
Ms. Bamba has 30 trees.
About _____ will lose their leaves.
About _____ will survive.

Mr. and Ms. Gamba have 44 trees.
About _____ will lose their leaves.
About _____ will survive.

Ms. Lamba has 52 trees.
About _____ will lose their leaves.
About _____ will survive.

Dr. Namba has 61 trees.
About _____ will lose their leaves.
About _____ will survive.

B-BUGS ARE COMING!



In each case, about how many trees will lose their leaves and how many trees will survive? Make your best prediction.

Mr. Samba has 60 trees.

About _____ will lose their leaves.

$$\frac{1}{3} \times 60 = \underline{\hspace{2cm}}$$

About _____ will survive.

$$\frac{2}{3} \times 60 = \underline{\hspace{2cm}}$$

Ms. Jamba has 36 trees.

About _____ will lose their leaves.

$$\frac{1}{3} \times 36 = \underline{\hspace{2cm}}$$

About _____ will survive.

$$\frac{2}{3} \times 36 = \underline{\hspace{2cm}}$$

Mr. and Ms. Kamba have 45 trees.

About _____ will lose their leaves.

$$\frac{1}{3} \times 45 = \underline{\hspace{2cm}}$$

About _____ will survive.

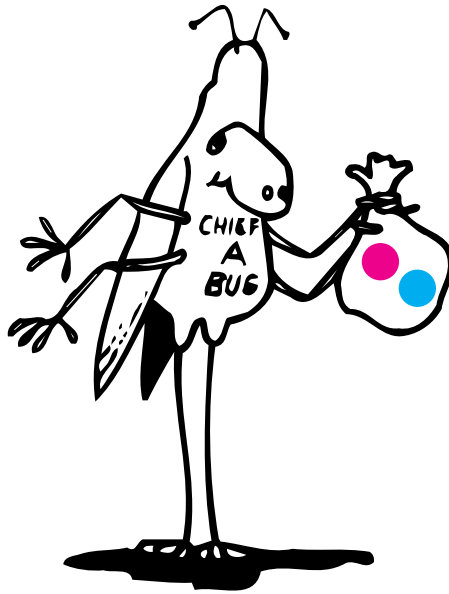
$$\frac{2}{3} \times 45 = \underline{\hspace{2cm}}$$

Name _____

P1

*

A-BUGS ARE COMING!



In each case, about how many trees will lose their leaves and how many trees will survive? Make your best prediction.

28 Trees About _____ will lose their leaves.

About _____ will survive.

$$\frac{1}{2} \times 28 = \underline{\hspace{2cm}}$$

300 Trees About _____ will lose their leaves.

About _____ will survive.

$$\frac{1}{2} \times 300 = \underline{\hspace{2cm}}$$

342 Trees About _____ will lose their leaves.

About _____ will survive.

$$\frac{1}{2} \times 342 = \underline{\hspace{2cm}}$$

405 Trees About _____ will lose their leaves.

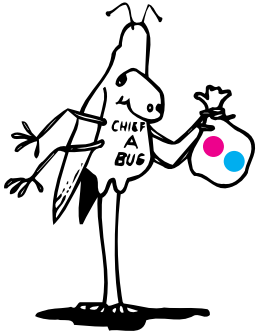
About _____ will survive.

$$\frac{1}{2} \times 405 = \underline{\hspace{2cm}}$$

Name _____

P1

In each case, about how many trees will lose their leaves and how many trees will survive? Make your best prediction.

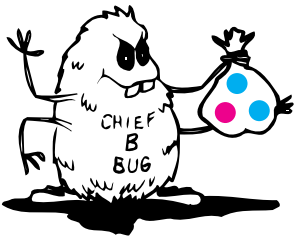


38 Trees

About _____ will lose their leaves.

About _____ will survive.

$$\frac{1}{2} \times 38 = \underline{\hspace{2cm}}$$

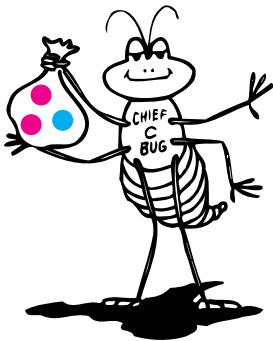


42 Trees

About _____ will lose their leaves. $\frac{1}{3} \times 42 = \underline{\hspace{2cm}}$

About _____ will survive.

$$\frac{2}{3} \times 42 = \underline{\hspace{2cm}}$$

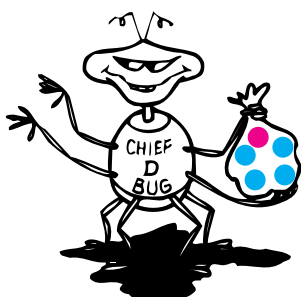


48 Trees

About _____ will lose their leaves. $\frac{2}{3} \times 48 = \underline{\hspace{2cm}}$

About _____ will survive.

$$\frac{1}{3} \times 48 = \underline{\hspace{2cm}}$$



35 Trees

About _____ will lose their leaves. $\frac{1}{5} \times 35 = \underline{\hspace{2cm}}$

About _____ will survive.

$$\frac{4}{5} \times 35 = \underline{\hspace{2cm}}$$

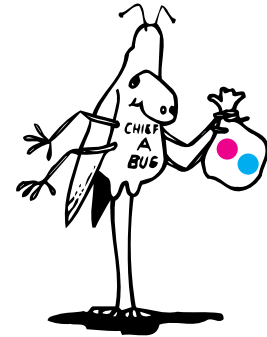
Name _____

In each case, about how many trees will lose their leaves and how many trees will survive? Make your best prediction.

67 Trees

About _____ will lose their leaves.

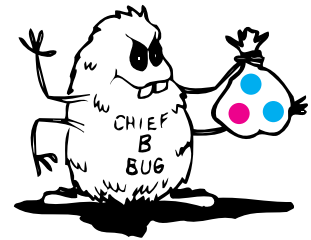
About _____ will survive.



67 Trees

About _____ will lose their leaves.

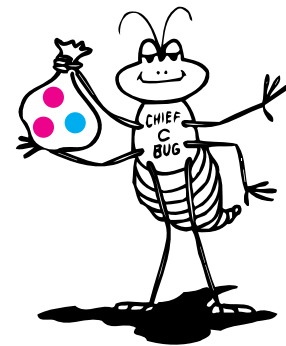
About _____ will survive.



67 Trees

About _____ will lose their leaves.

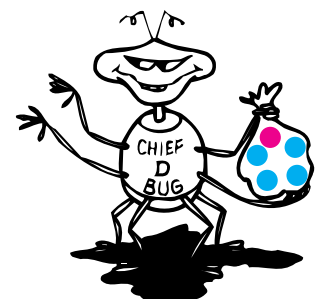
About _____ will survive.



67 Trees

About _____ will lose their leaves.

About _____ will survive.



Name _____

P3(a)

Use the graphs to fill in the tables for Babe Ruth and Hank Aaron.

	BABE RUTH: 1920		HANK AARON: 1971	
	Number of Hits	Number of Bases	Number of Hits	Number of Bases
Singles				
Doubles				
Triples				
Home Runs				
Totals				

Answer these questions.

1. How many home runs did Babe Ruth have? _____
How many home runs did Hank Aaron have? _____
How many more home runs did Babe Ruth have than Hank Aaron? _____
2. Who had more hits? _____
How many more? _____
3. Who had more total bases? _____
How many more? _____
4. Who do you think was the better hitter:
Babe Ruth in 1920 or Hank Aaron in 1971? _____
Why? _____

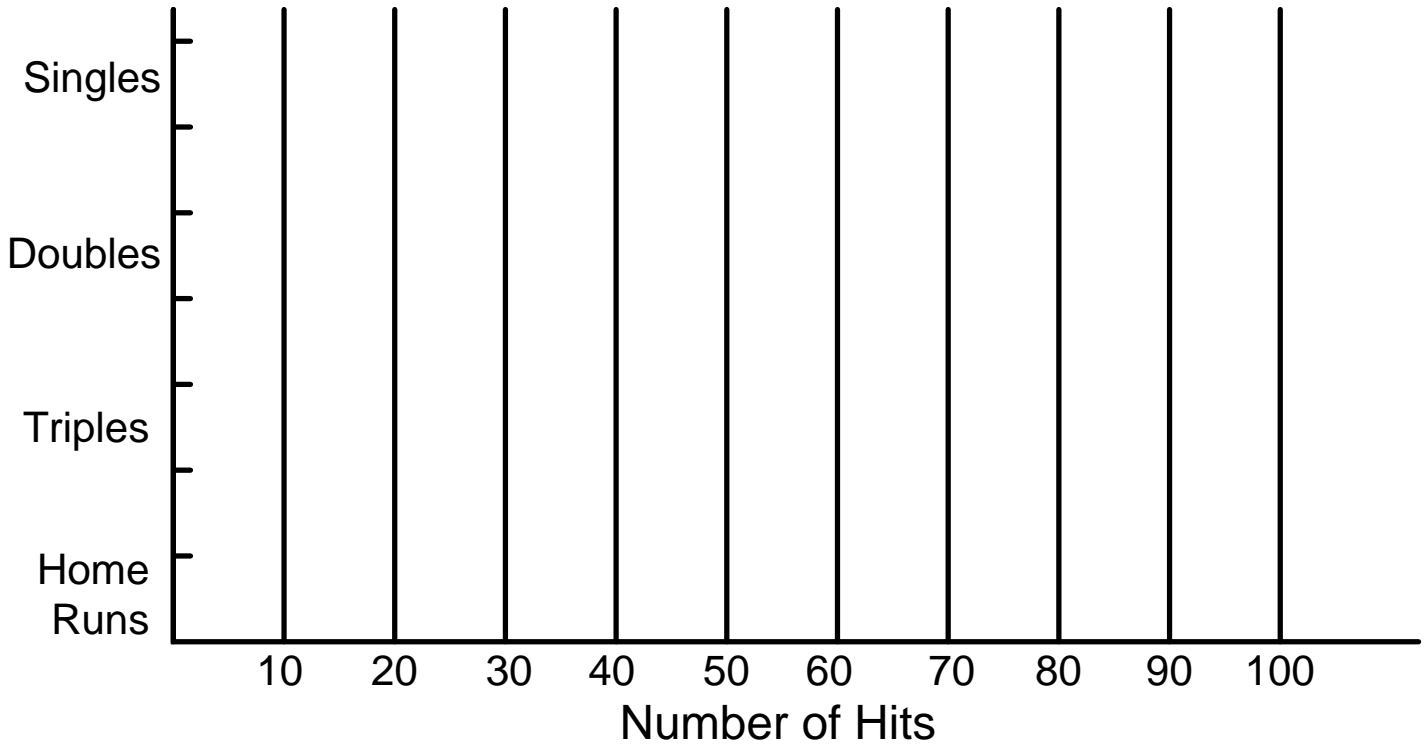
Name _____

P3(b)

Complete these bar graphs.

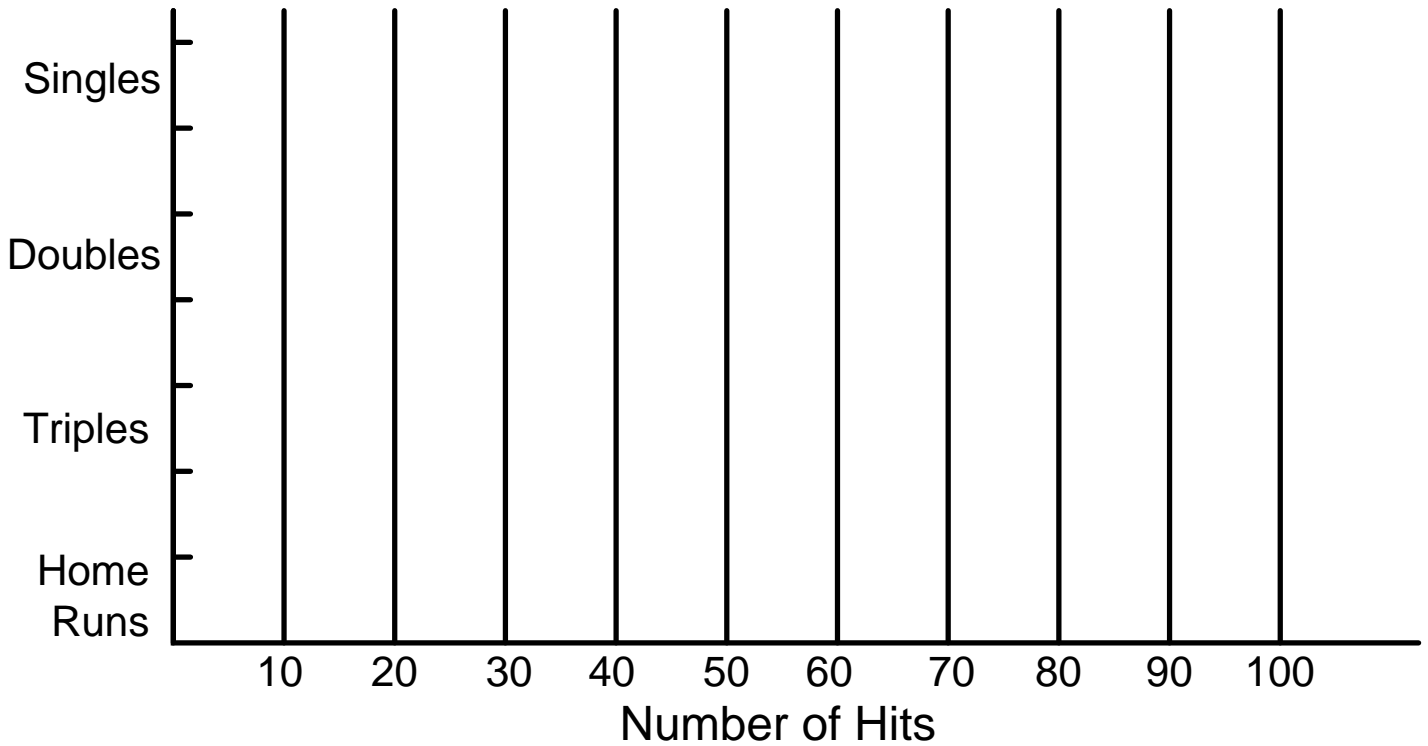
Player's Name: _____

Year: _____



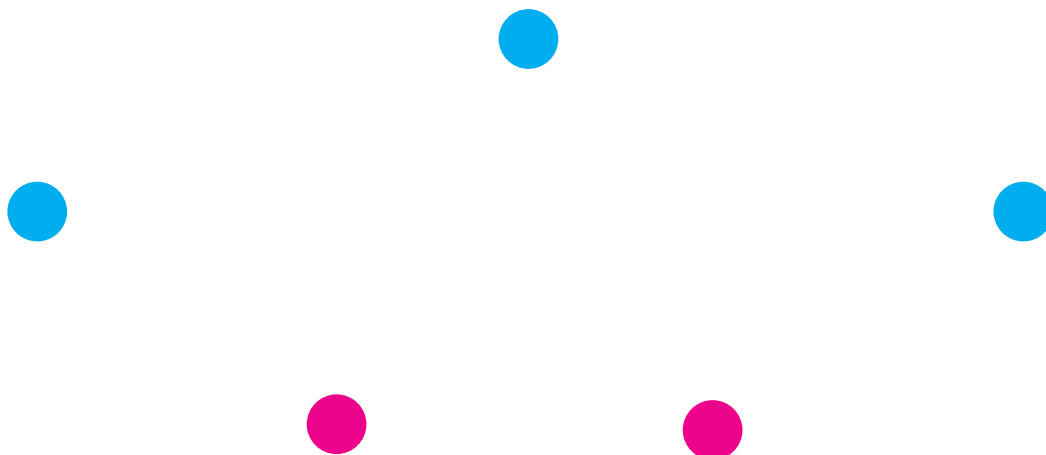
Player's Name: _____

Year: _____



Name _____

Suppose you have two red marbles and three blue marbles. Draw cords to show all of the different ways that you could select two marbles. Label a cord between marbles of the same color **S**; label a cord between marbles of different colors **D**.

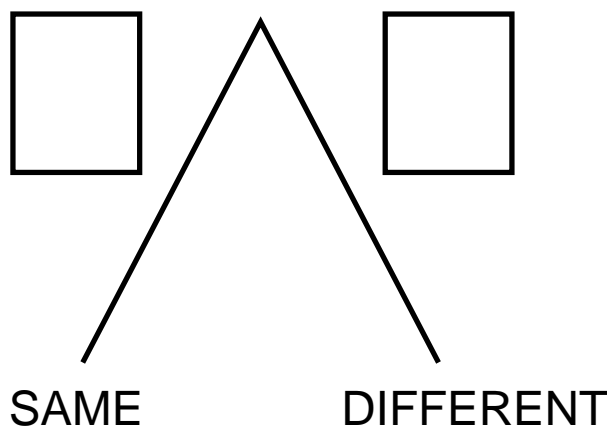


How many cords did you draw? _____

How many cords are for SAME? _____

How many cords are for DIFFERENT? _____

Write the probabilities in the boxes.



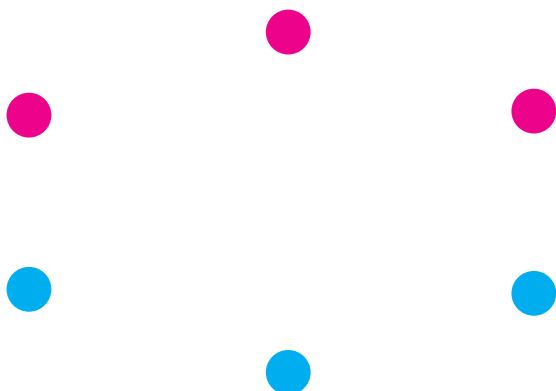
Which is more likely, SAME or DIFFERENT? _____

Name _____

This game uses three red marbles and three blue marbles.

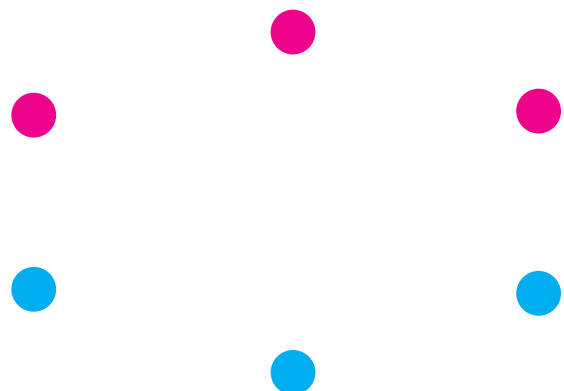
SAME

Draw cords to show all of the ways you could select two marbles of the same color.



DIFFERENT

Draw cords to show all of the ways you could select two marbles of different colors.

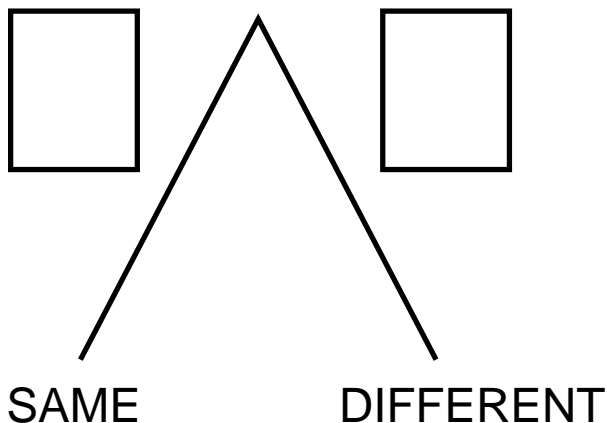


How many cords are for SAME? _____

How many cords are for DIFFERENT? _____

Altogether, how many cords did you draw? _____

Write the probabilities in the boxes.



Which is more likely, SAME or DIFFERENT? _____

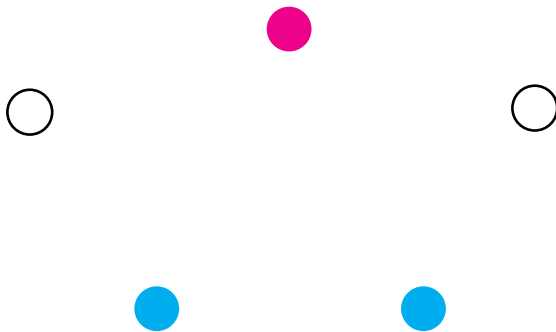
Name _____

P5

Suppose you have one red, two blue, and two white marbles.

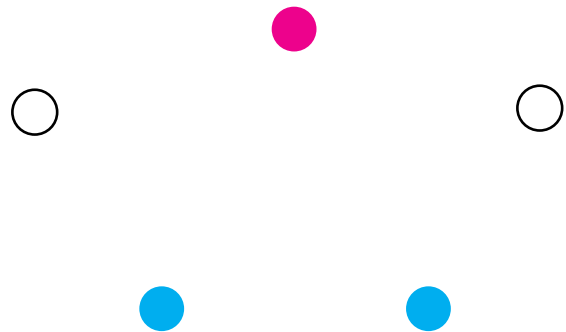
SAME

Show all of the possible ways of selecting two marbles of the same color.



DIFFERENT

Show all of the possible ways of selecting two marbles of different colors.

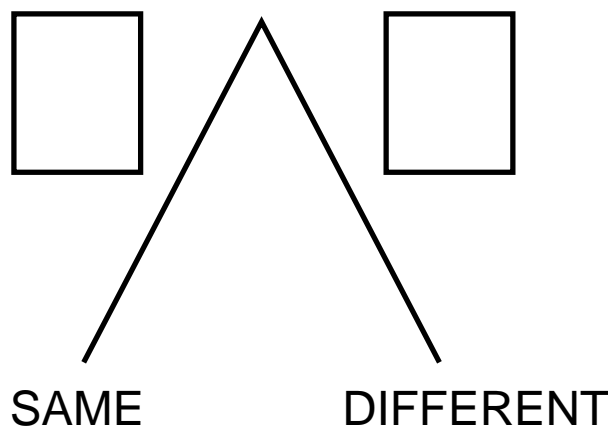


How many cords are for SAME? _____

How many cords are for DIFFERENT? _____

Altogether, how many cords did you draw? _____

Write the probabilities in the boxes.

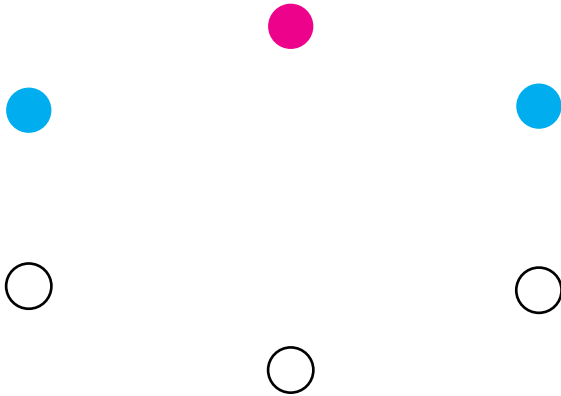


Which is more likely, SAME or DIFFERENT? _____

Suppose you have one red, two blue, and three white marbles.

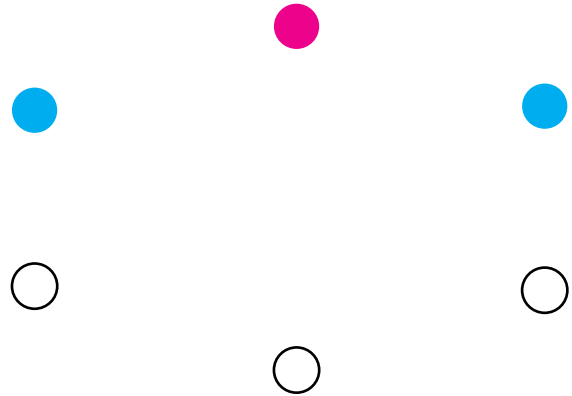
SAME

Show all of the possible ways of selecting two marbles of the same color.



DIFFERENT

Show all of the possible ways of selecting two marbles of different colors.

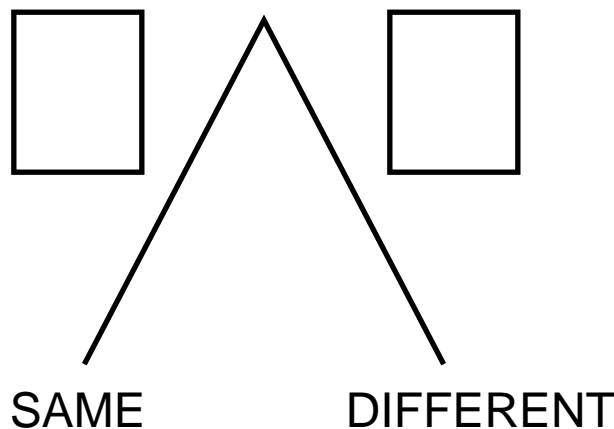


How many cords are for SAME? _____

How many cords are for DIFFERENT? _____

Altogether, how many cords did you draw? _____

Write the probabilities in the boxes.



Which is more likely, SAME or DIFFERENT? _____

Name _____

Suppose you have two red marbles and two blue marbles. You mix them up and select one marble at random. You put it back and select another marble at random.

Show all of the possible ways of selecting two marbles of the same color.

Show all of the possible ways of selecting two marbles of different colors.



Write the probabilities in the boxes.

SAME

DIFFERENT

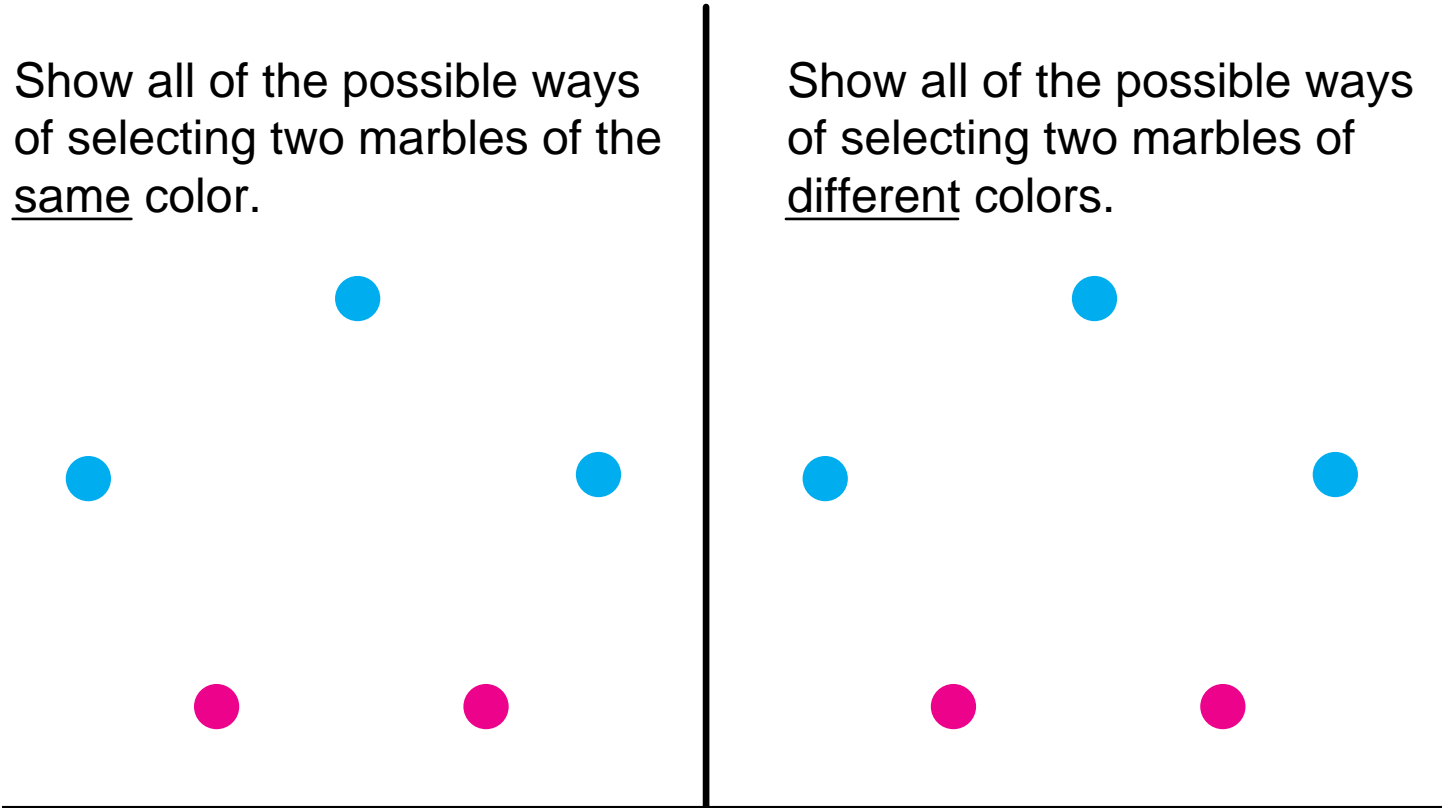
Which is more likely, SAME or DIFFERENT? _____

Name _____

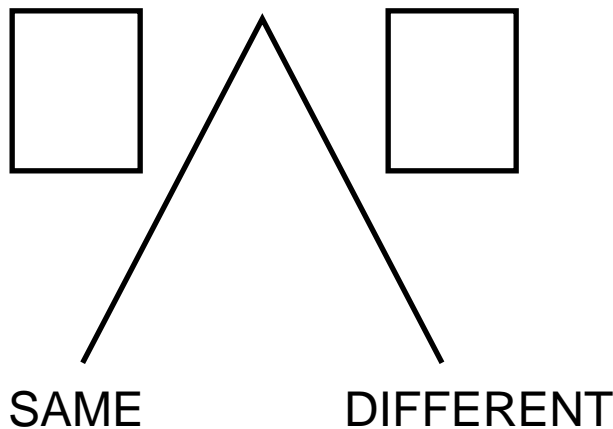
Suppose you have two red marbles and three blue marbles. You mix them up and select one marble at random. You put it back and select another marble at random.

Show all of the possible ways of selecting two marbles of the same color.

Show all of the possible ways of selecting two marbles of different colors.



Write the probabilities in the boxes.



Which is more likely, SAME or DIFFERENT? _____

Name _____

P7(a)

Murray and Hubbard are centers for the basketball team. These are their scoring and rebound statistics for the first five games of the season.

		Game 1	Game 2	Game 3	Game 4	Game 5
Murray	points scored	24	9	14	17	21
	rebounds	14	16	2	12	11
Hubbard	points scored	11	15	28	13	13
	rebounds	17	11	12	17	13

Who scored the most points in one game? _____

Who scored the most rebounds in one game? _____

What is Murray's average number of points scored per game? _____

What is Hubbard's average number of points scored per game? _____

Is Murray or Hubbard a better scorer? _____

What is Murray's average number of rebounds per game? _____

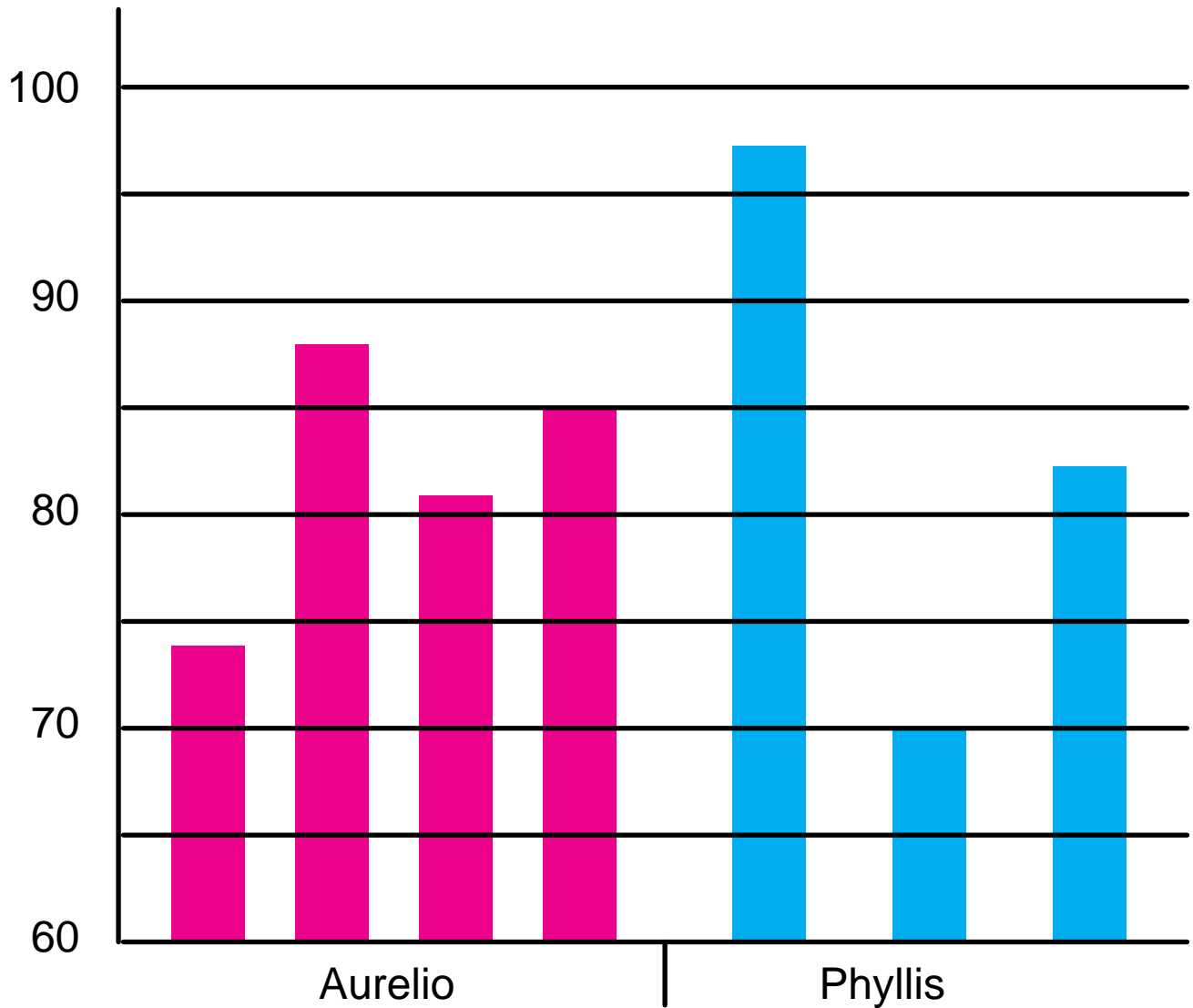
What is Hubbard's average number of rebounds per game? _____

Is Murray or Hubbard a better rebounder? _____

Name _____

P7(b)

The graph shows the spelling test scores of Aurelio and Phyllis. Phyllis was absent one day and took only three tests. Find the average test scores for each student.



What is Aurelio's average score? _____

What is Phyllis's average score? _____

Does Aurelio or Phyllis have the better test score average? _____

Name _____

P7(c)

CITY BASKETBALL TOURNAMENT

McKINLEY HIGH SCHOOL		CENTRAL HIGH SCHOOL	
<u>Players</u>	<u>Height (cm)</u>	<u>Players</u>	<u>Height (cm)</u>
Patton	194	Monroe	196
Myers	180	Franz	180
Rone	190	Keister	158
Redmond	212	Stake	180
Engert	182	Brooks	177
Fletcher	152	Oldani	198
		McMillin	172
		Broglio	187

Who is the tallest player for McKinley? _____

Who is the tallest player for Central? _____

How much taller is Redmond than Oldani? _____

How much taller is Monroe than Keister? _____

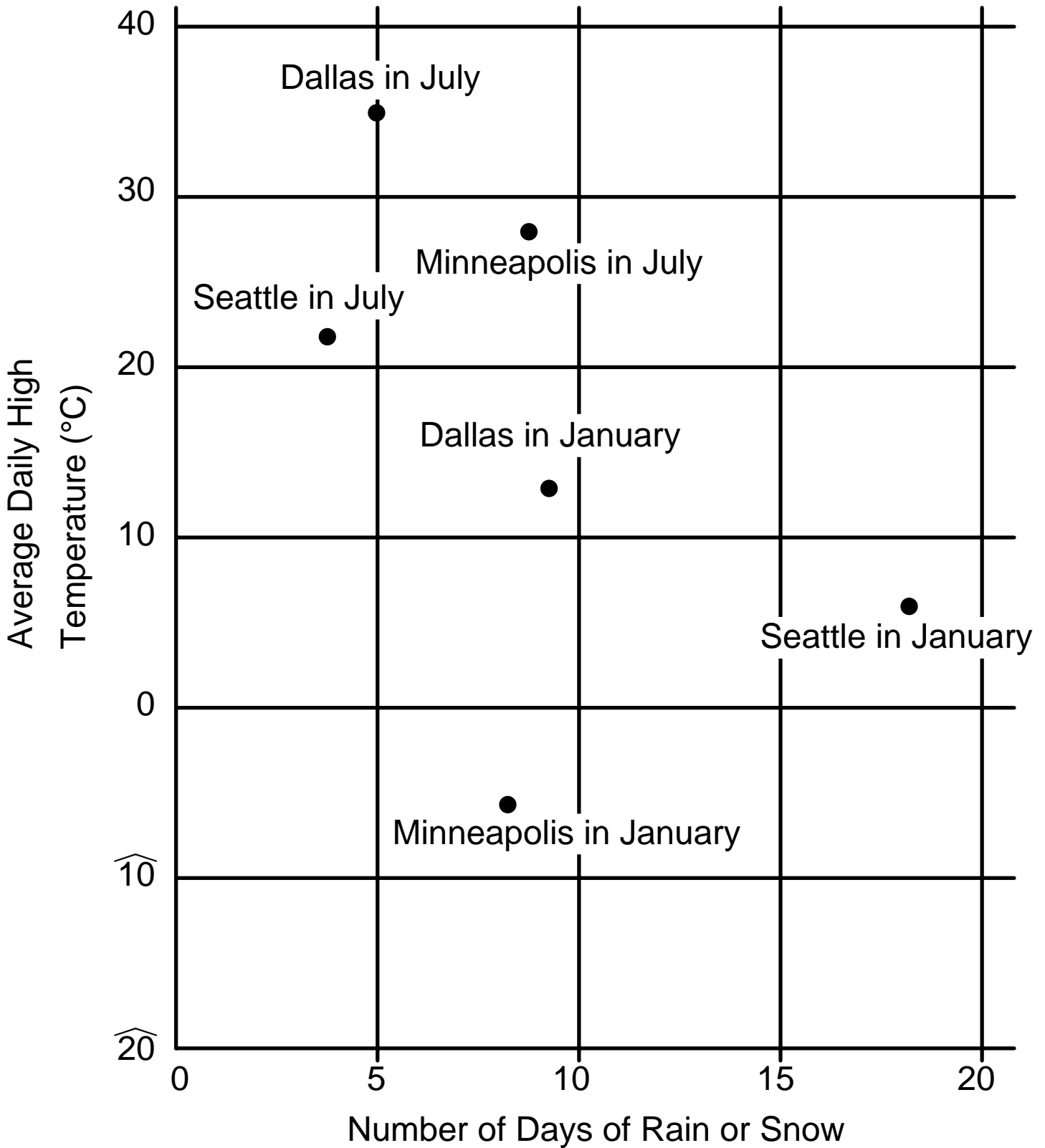
Find the average height of McKinley's players. _____

Find the average height of Central's players. _____

Name _____

P8

MONTHLY CLIMATE OF U.S. CITIES



Name _____

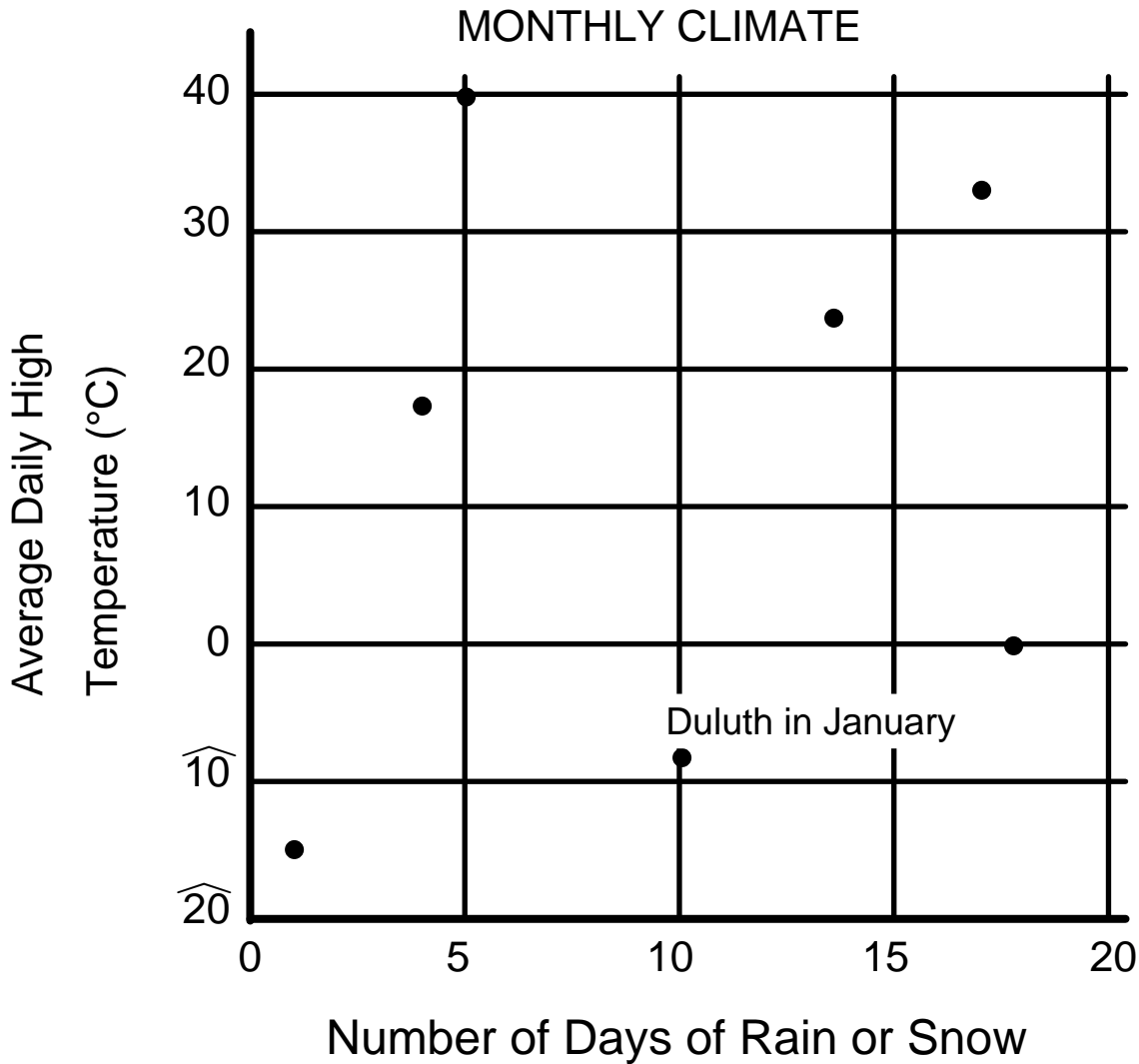
P8

*

Use the graph on Worksheet P8(no stars) to answer these questions.

1. Which city is hottest in July? _____
Which city is hottest in January? _____
Which city is coldest in July? _____
Which city is coldest in January? _____
2. Which city is driest in January? _____
Which city is driest in July? _____
Which city averages the most rainy days in January? _____
Which city averages the most rainy days in July? _____
3. What is the average daily high temperature in Dallas in January? _____
How many days of rain does Dallas average in January? _____
4. What is Minneapolis's average daily high temperature in January? _____
How many days of rain or snow does Minneapolis average
in January? _____
5. How much warmer is Dallas in July than Seattle in July? _____
How much warmer is Seattle in July than in January? _____
How much warmer is Minneapolis in July than in January? _____
6. On the graph, draw and label two dots for Fairbanks, Alaska.
 - a. In July, Fairbanks averages 13 days of rain and the average daily high temperature is 22° C.
 - b. In January, Fairbanks averages 10 days of snow and the average high temperature is 19° C.

Name _____



Using the following descriptions, label the dots on the graph.
One is done for you.

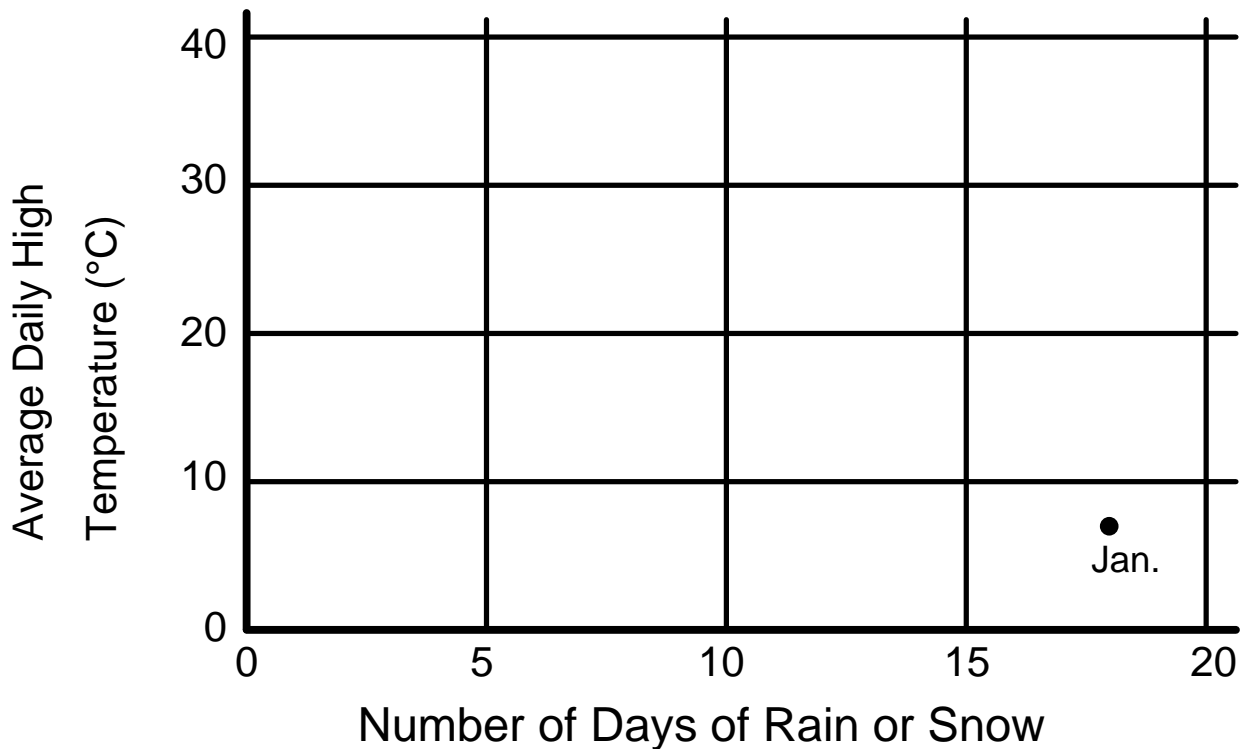
- a. Duluth, Minnesota receives some snow and is very cold in January.
- b. Phoenix, Arizona is dry and very hot in July.
- c. In January, Phoenix is dry and has a pleasant temperature.
- d. Juneau, Alaska is cold and very wet in January.
- e. Tampa Bay, Florida is very hot and rainy in July.
- f. Moosonee, Ontario, in Canada, is very cold and very dry in January.
- g. In January, Honolulu is quite rainy, but has a pleasant temperature.

Name _____

Seattle, Washington

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Days of Rain	18	16	13	13	12	9	4	5	8	13	17	19
Temp (°C)	7	9	11	14	18	20	22	23	19	15	11	8

Use the above data to draw a graph of Seattle’s weather. Draw and label one dot for each month. January is done for you.

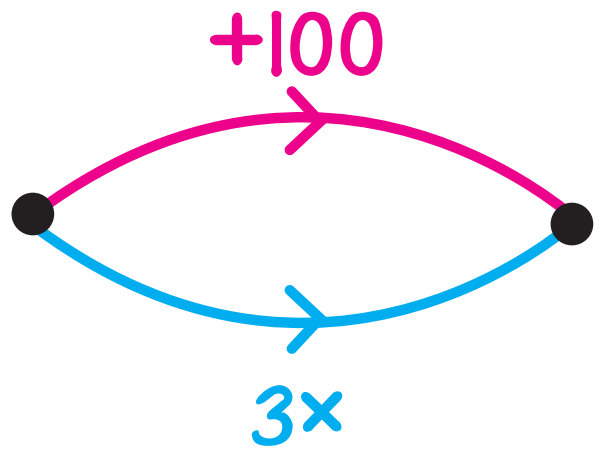
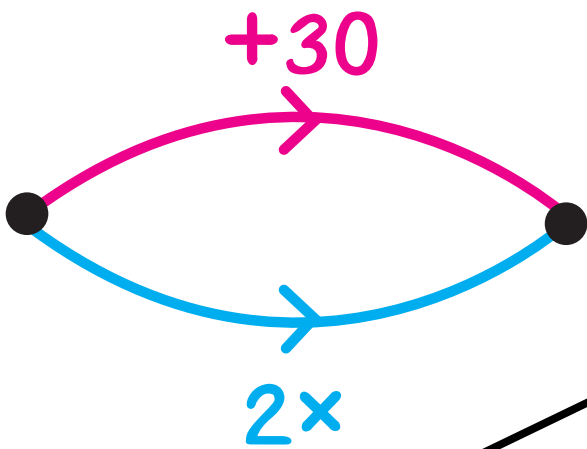
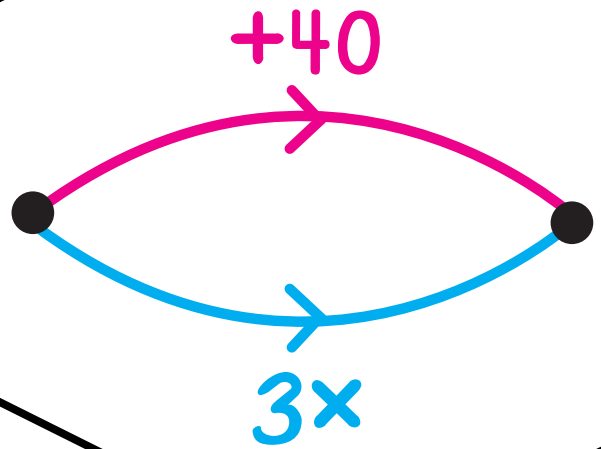
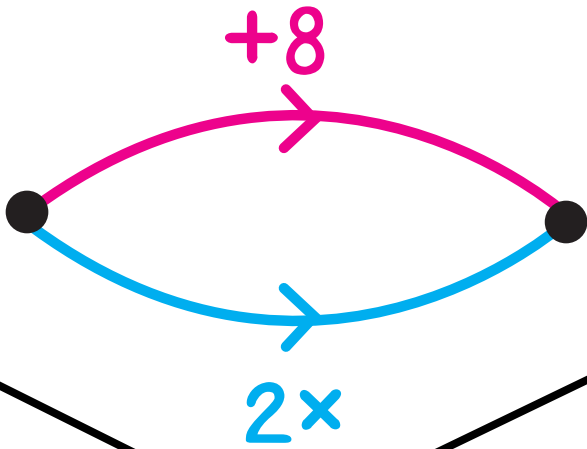


1. Which do you think is the best month to visit Seattle? _____
Why? _____
2. Which do you think is the worst month to visit Seattle? _____
Why? _____

Name _____

W7 *

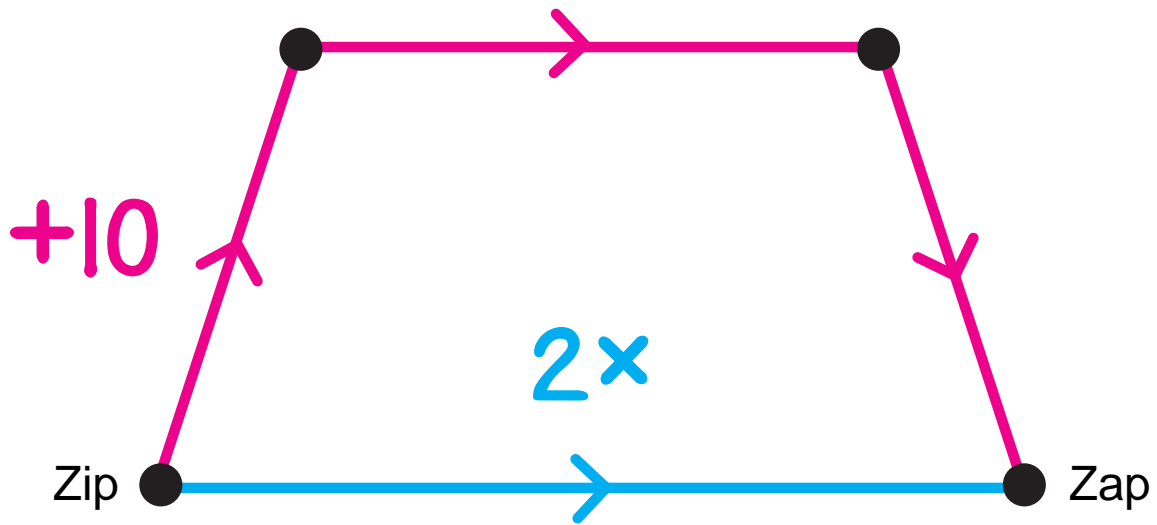
Label the dots in each picture.



Name _____

W7 **

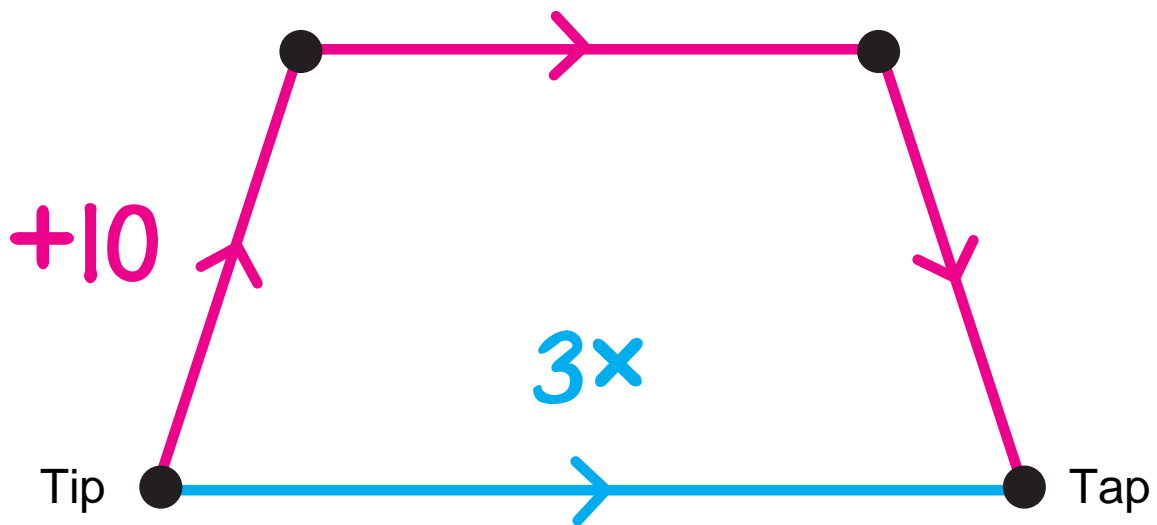
Zip and Zap are secret numbers.



Who is Zip? _____

Who is Zap? _____

Tip and Tap are secret numbers.



Who is Tip? _____

Who is Tap? _____