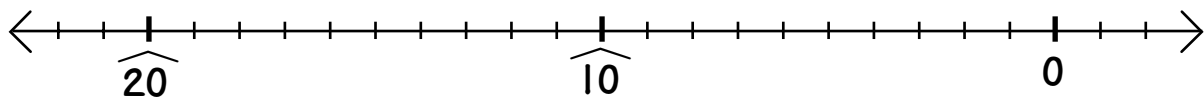
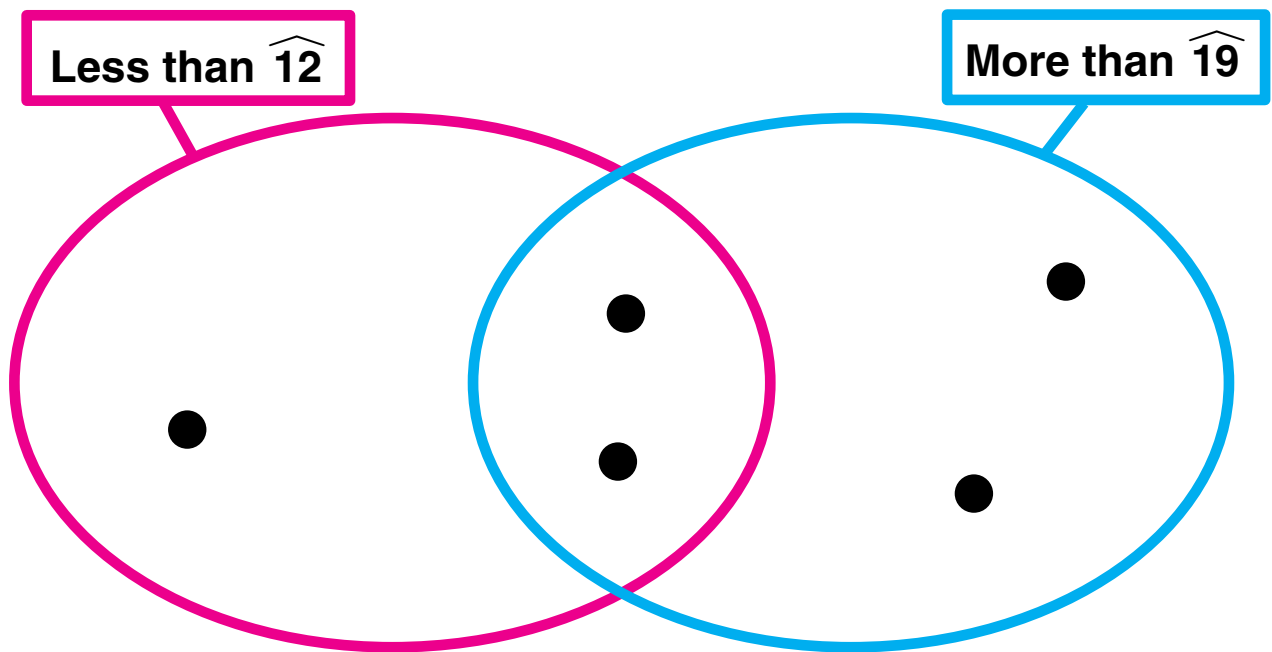


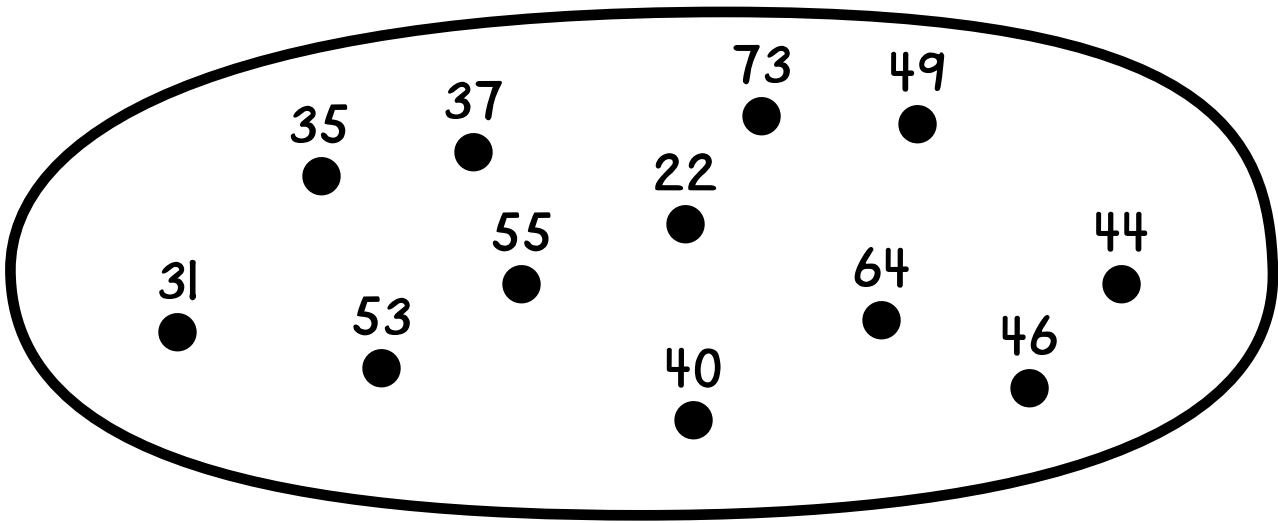
Name \_\_\_\_\_

# Variety of Problems #2

Label the dots. There are many possibilities.



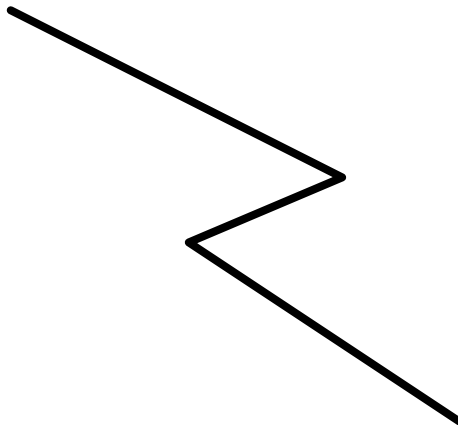
Correctly place these numbers in the arrow picture.



+9



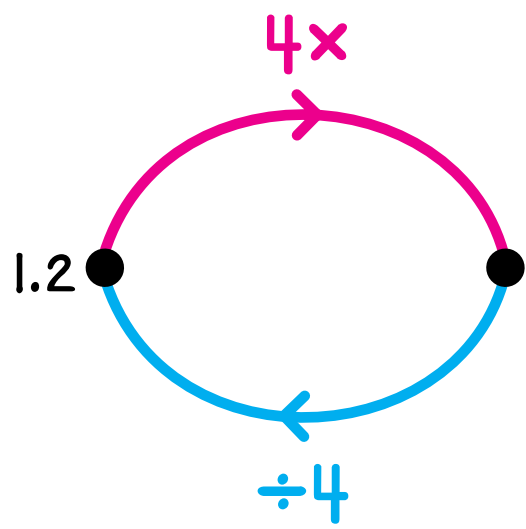
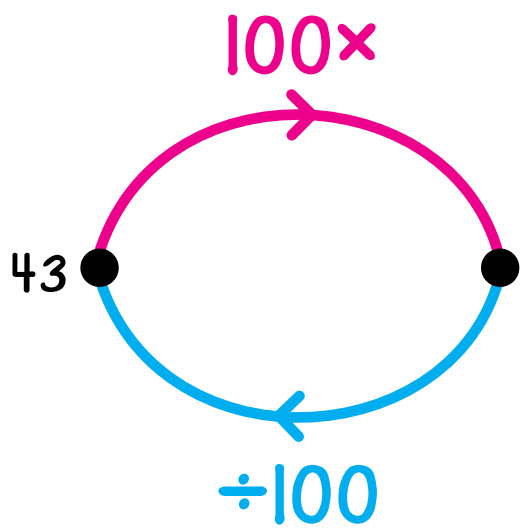
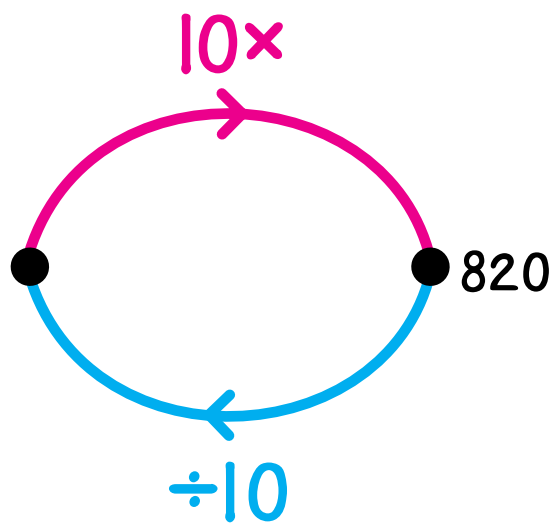
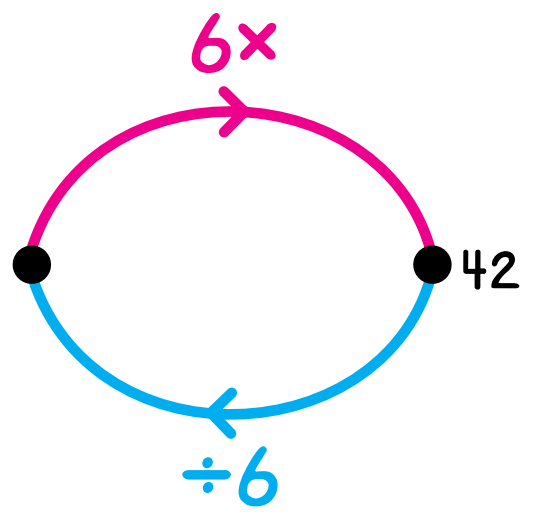
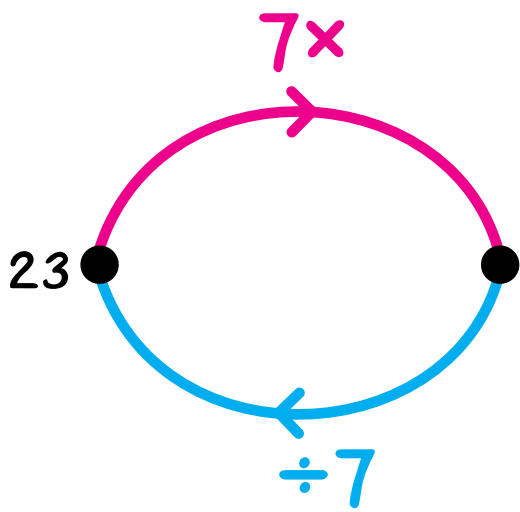
This zigzag is longer than 11 cm but shorter than 12 cm.  
How long is it? \_\_\_\_\_cm



Draw a zigzag that has three pieces, and that is longer than 13.6 cm but shorter than 13.9 cm.

How long is the zigzag? \_\_\_\_\_cm

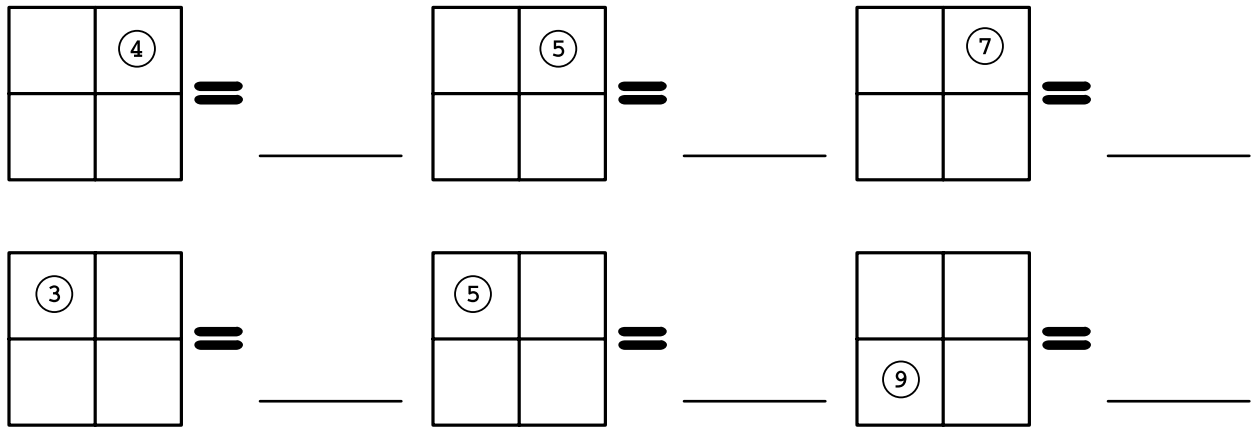
Label the dots.



Rack is a secret number.

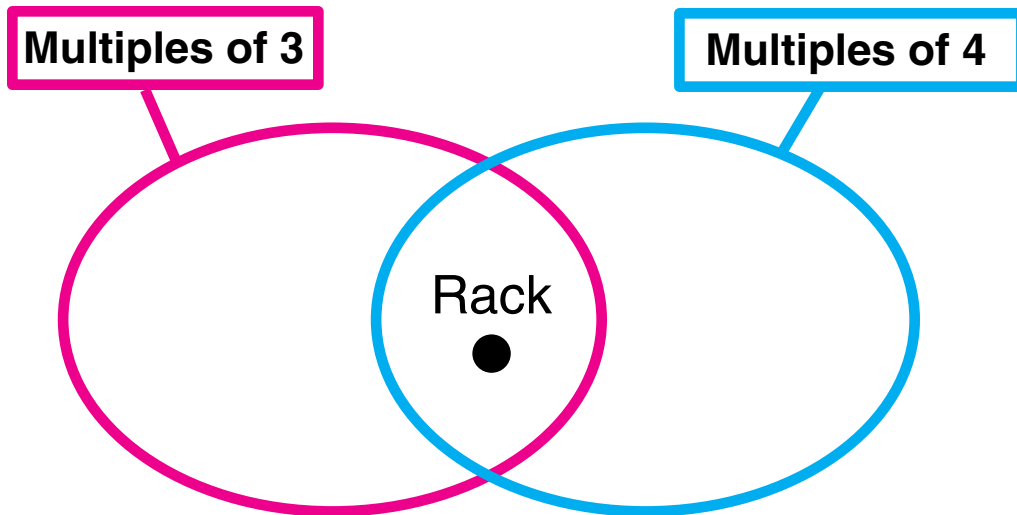
Clue 1

Rack is one of these numbers on the Minicomputer.



Clue 2

Rack is in this string picture.



Who is Rack? \_\_\_\_\_

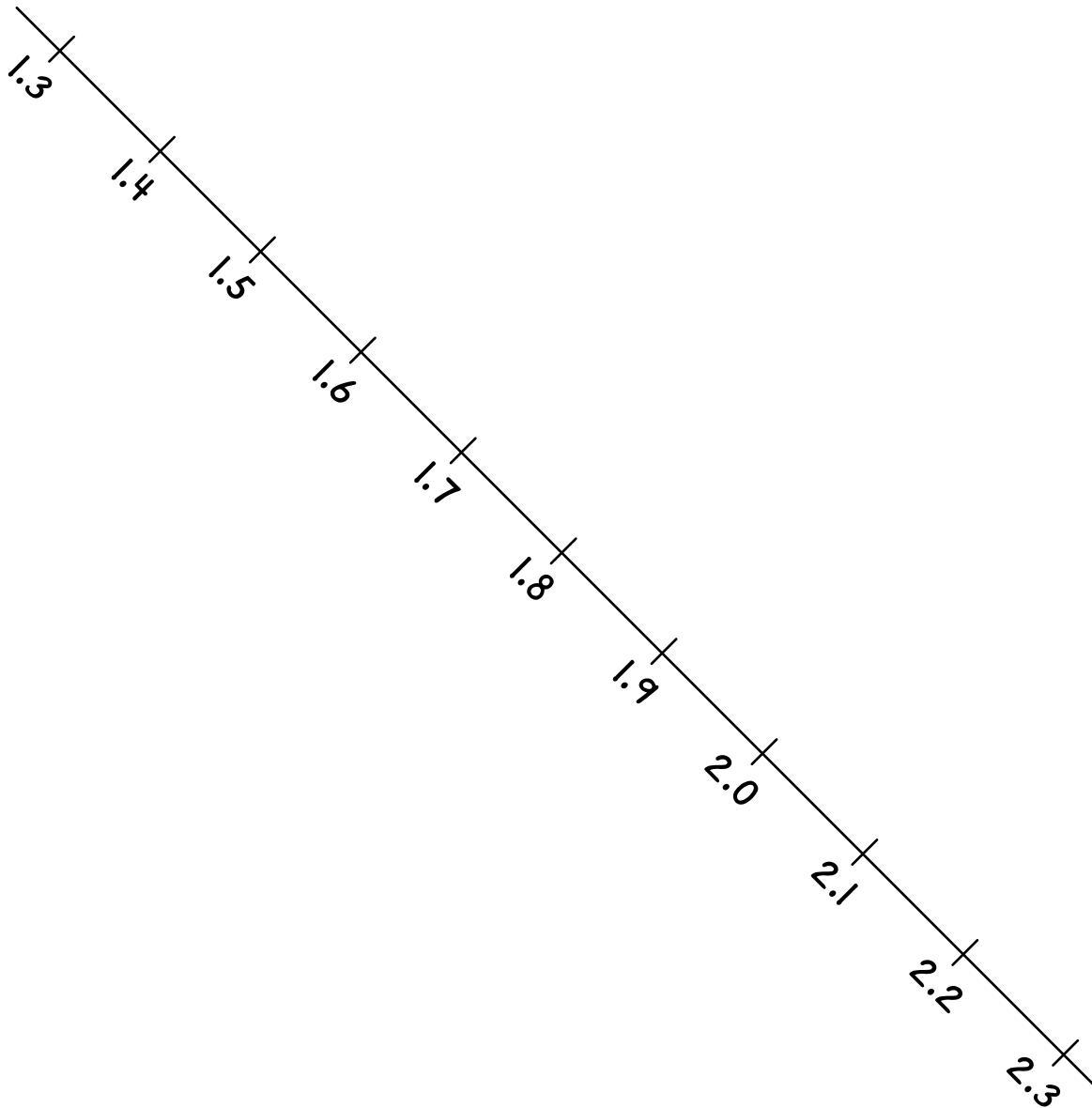
Draw and label dots for these numbers.

**1.45**

**2.27**

**1.83**

**2.07**



Janine multiplied by 4 when she meant to subtract 4.

Then she added 7 when she meant to multiply by 7.

The answer she got was 39.

What answer should she have gotten? \_\_\_\_\_

Hint: Draw an arrow picture to show what Janine did and what she meant to do.



Tell whether each number is even or odd.

$100 + 102 + 103$

---

$52 + 53 + 54$

---

$2 \times 175$

---

$3 \times 123$

---

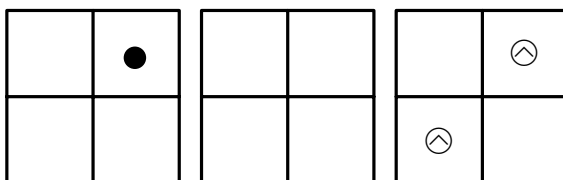
$4 \times 51$

---

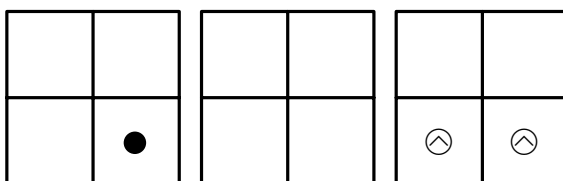
$10 \times 99$

---

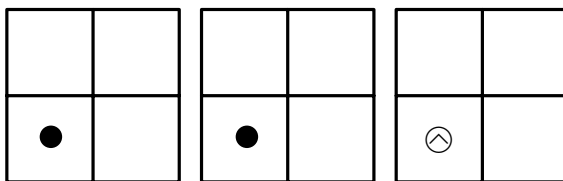
Tell whether each number is even or odd.



---

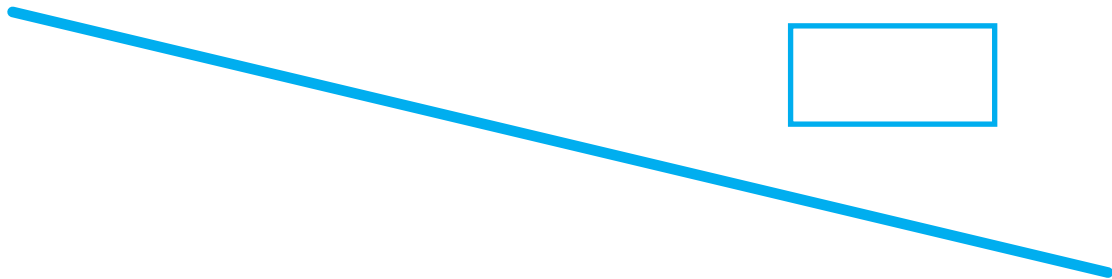
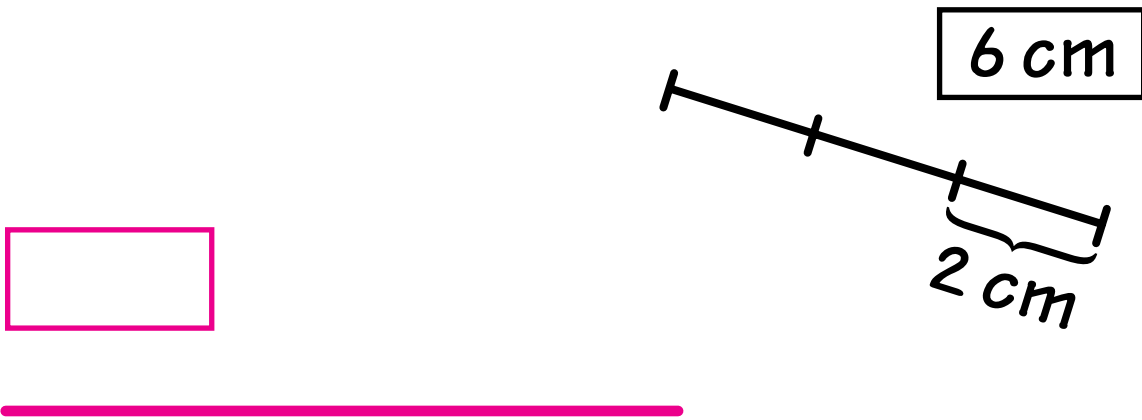


---



---

Measure each line segment in centimeters and record its length in the box of the same color. Then divide each segment into three pieces of the same length. One is done for you.



Draw a line segment 12.6 cm long and divide it into three pieces of the same length.

How long is each piece? \_\_\_\_\_

Calculate.

$$\begin{array}{r} 36 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \\ 86 \\ + 104 \\ \hline \end{array}$$

$$\begin{array}{r} 69 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 69 \\ \times 37 \\ \hline \end{array}$$

$$\begin{array}{r} 706 \\ - 513 \\ \hline \end{array}$$

$$\begin{array}{r} 107 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 107 \\ \times 28 \\ \hline \end{array}$$

$$\begin{array}{r} 107 \\ \times 428 \\ \hline \end{array}$$

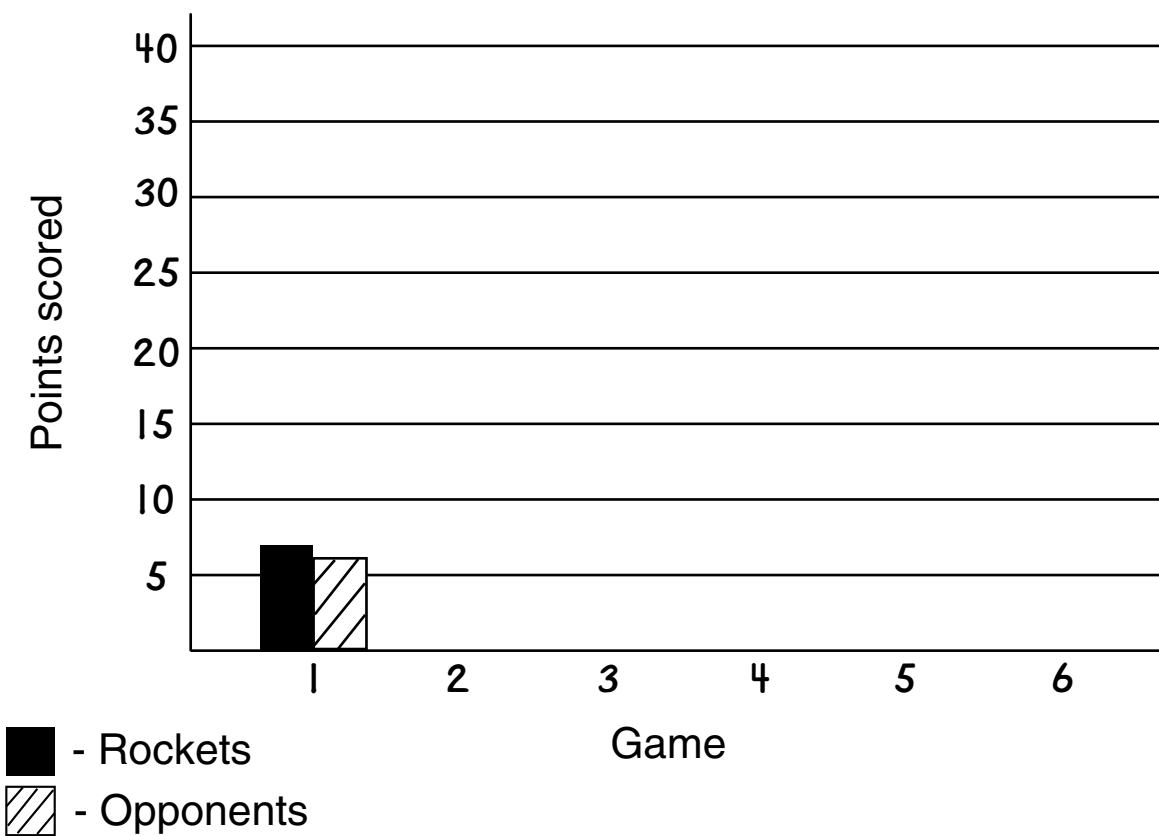
$$\widehat{12} + \widehat{8} + 10 = \underline{\quad}$$

$$20 + \widehat{30} + \widehat{14} + 1 = \underline{\quad}$$

Here are the results of the Rochester Rockets first six football games.

Rockets	7	10	14	24	21	35
Opponents	6	7	7	10	19	41

Graph each game's results below. The first game is done for you.



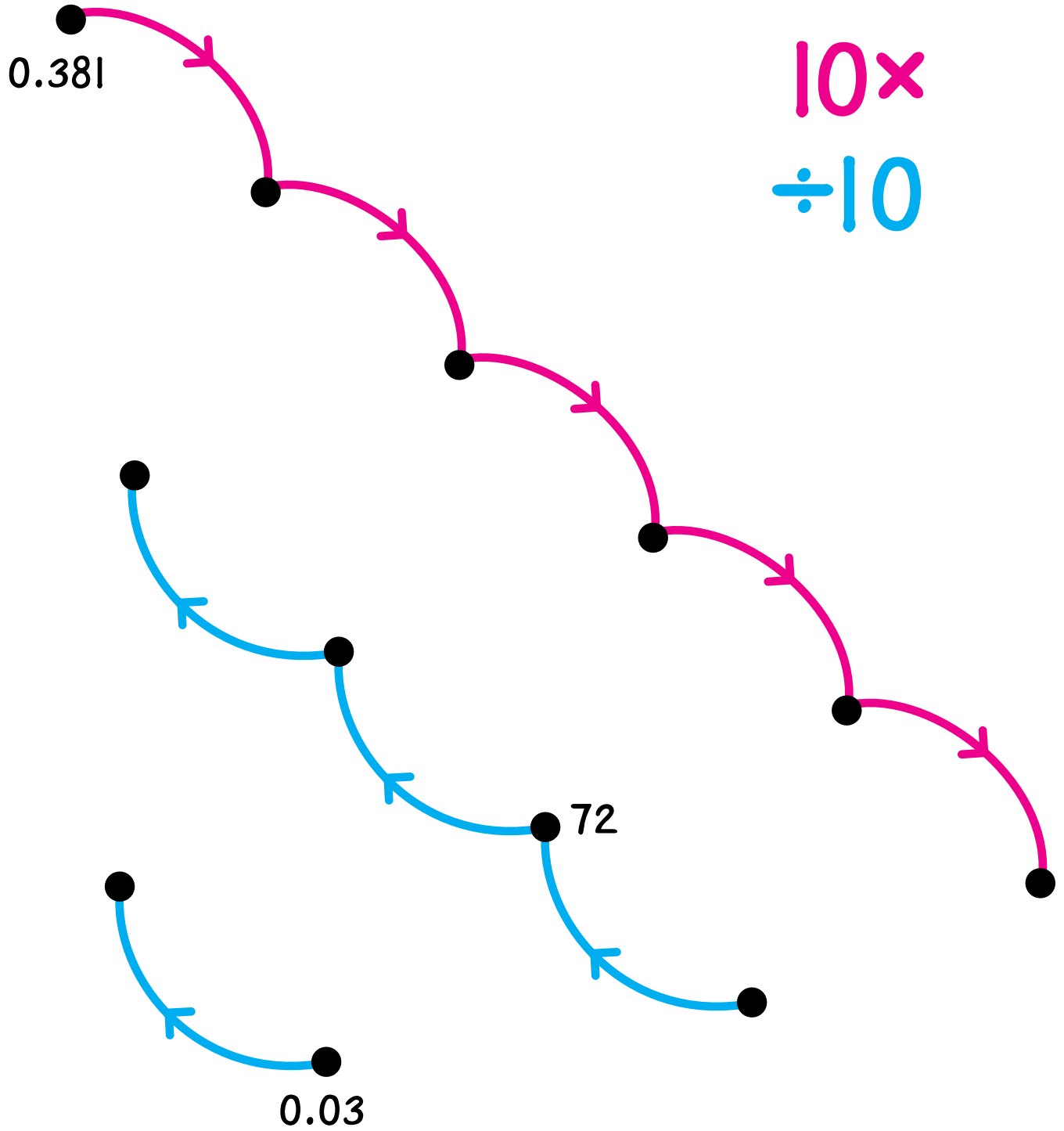
Which game did the Rockets win by the most points? \_\_\_\_\_

Which game did the opponents lose by the fewest points? \_\_\_\_\_

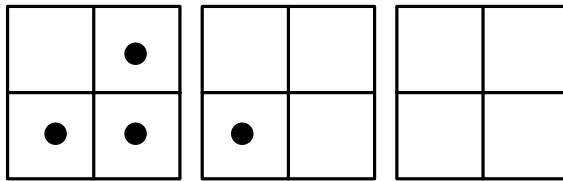
Did the offense improve during the season? \_\_\_\_\_

Did the defense improve during the season? \_\_\_\_\_

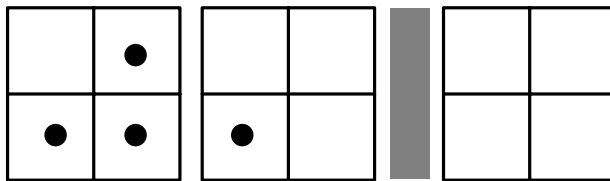
Label the dots.



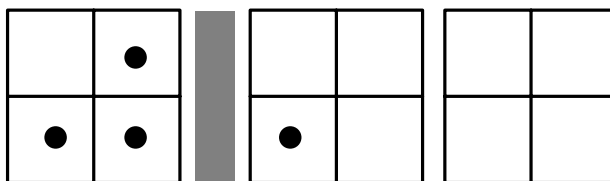
Move exactly one checker and make the number 20 greater.



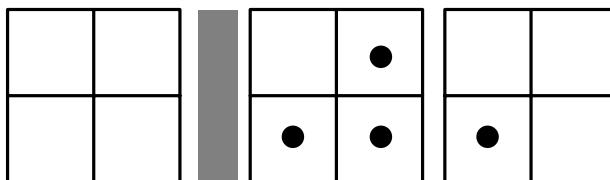
Move exactly one checker and make the number 2 greater.



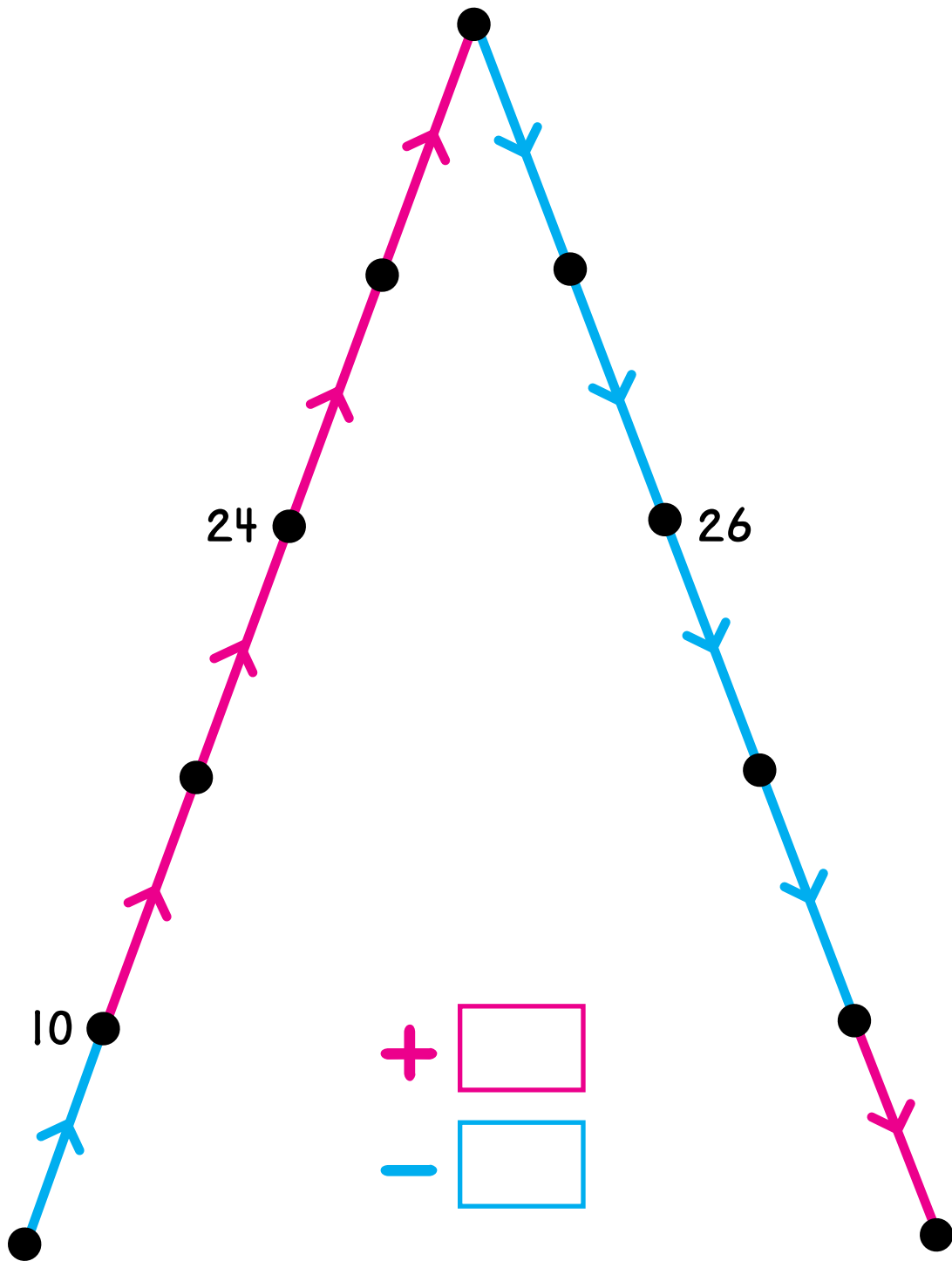
Move exactly one checker and make the number 0.2 greater.



Move exactly one checker and make the number 0.02 greater.

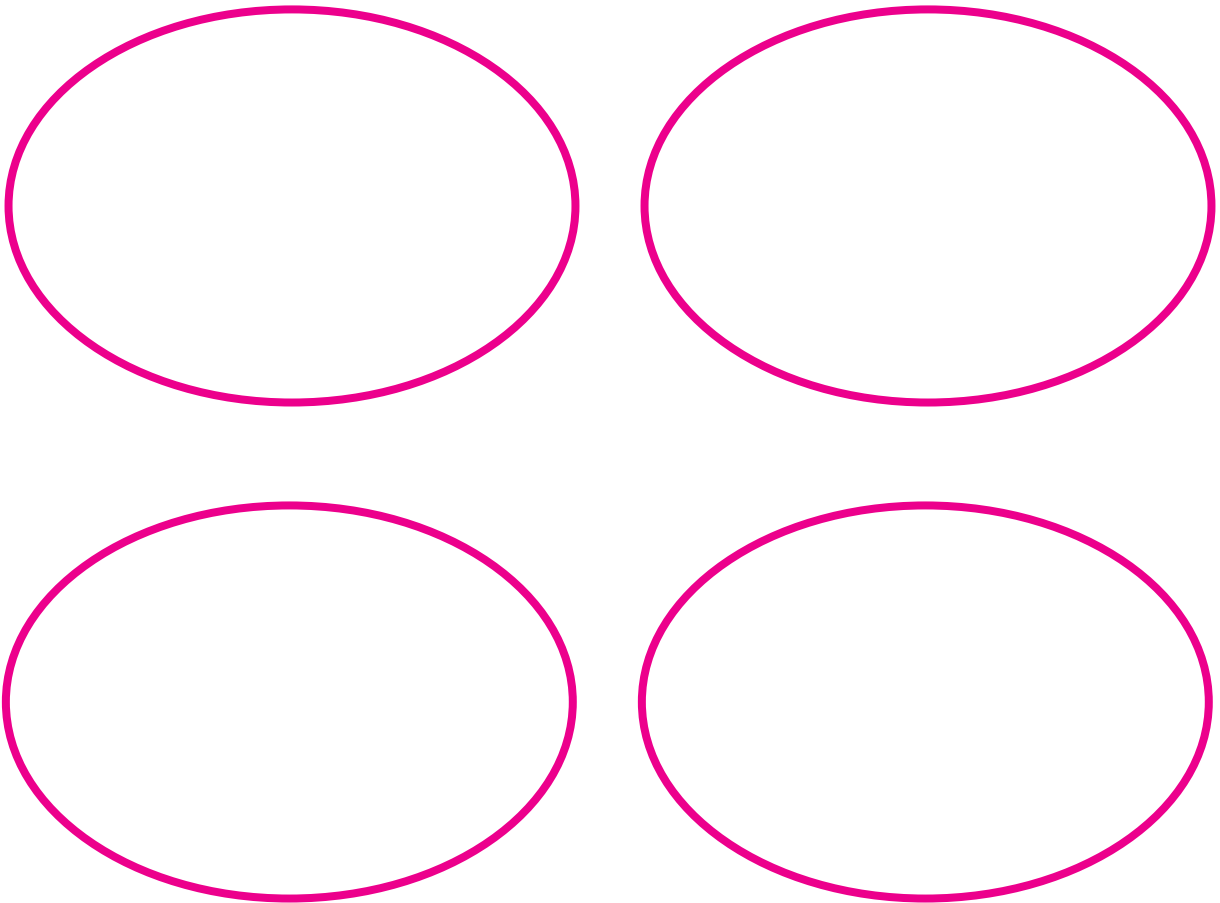


Fill in the boxes for the arrows and label the dots.



15

Share 1 568 oranges among 4 grocery stores.



Complete this number sentence.

$$\frac{1}{4} \times 1568 = \underline{\hspace{2cm}}$$



Calculate.

$$7 \times 4 = \underline{\quad}$$

$$28 \div 4 = \underline{\quad}$$

$$280 \div 4 = \underline{\quad}$$

$$2\,800 \div 4 = \underline{\quad}$$

$$2\,800 \div 7 = \underline{\quad}$$

$$8 \times 6 = \underline{\quad}$$

$$48 \div 8 = \underline{\quad}$$

$$480 \div 8 = \underline{\quad}$$

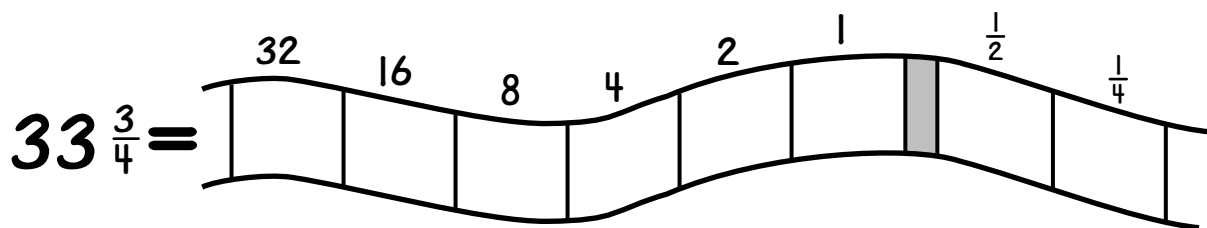
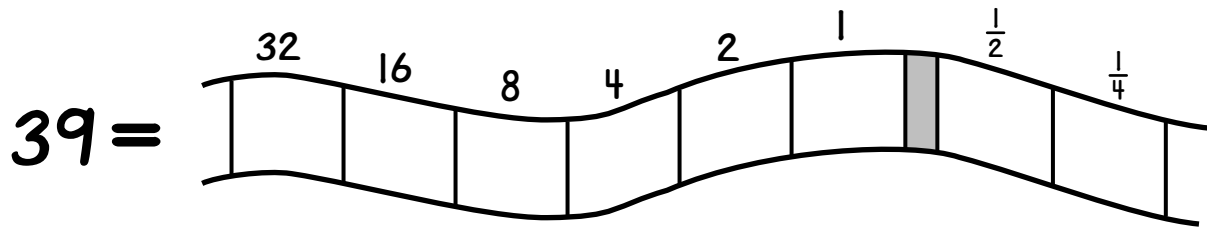
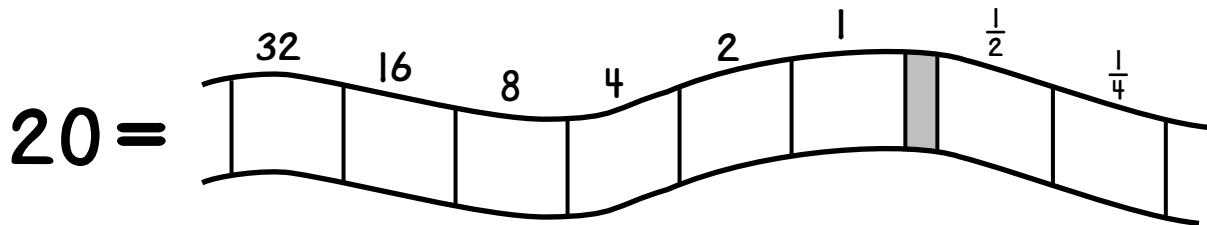
$$4\,800 \div 8 = \underline{\quad}$$

$$4\,800 \div 6 = \underline{\quad}$$

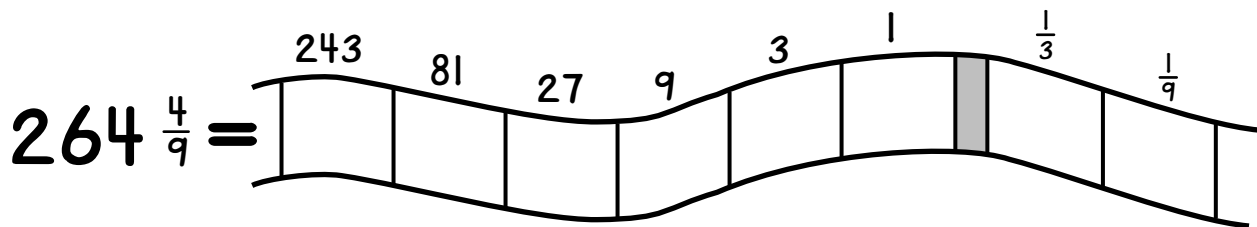
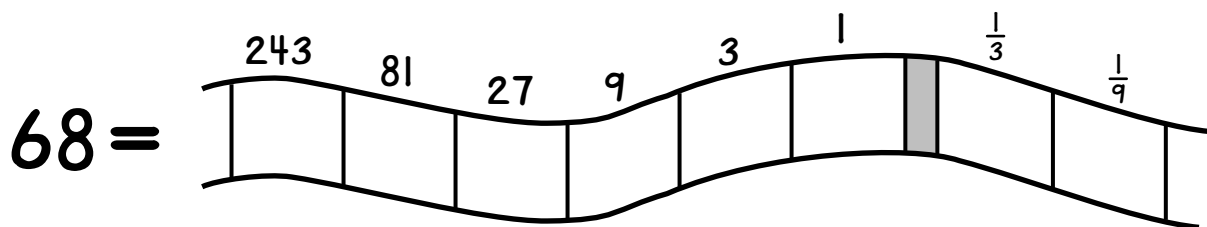
A printer can print 10 pages in 3 minutes. If the printer works non-stop, how many pages can it print in 4 hours? \_\_\_\_\_

A machine can fill 80 boxes of paper clips in 15 minutes. Each box contains 100 paper clips. How many boxes can be filled in 6 hours? \_\_\_\_\_

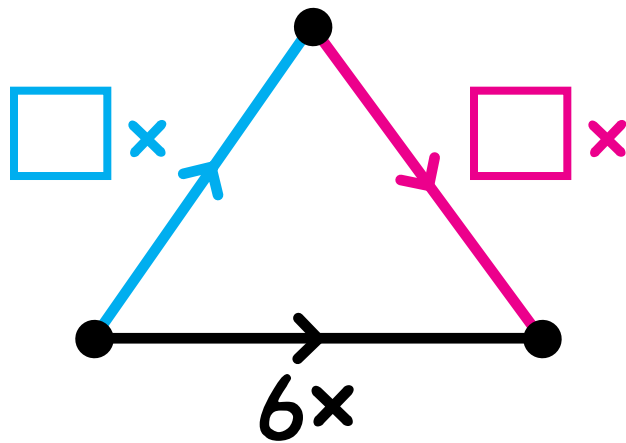
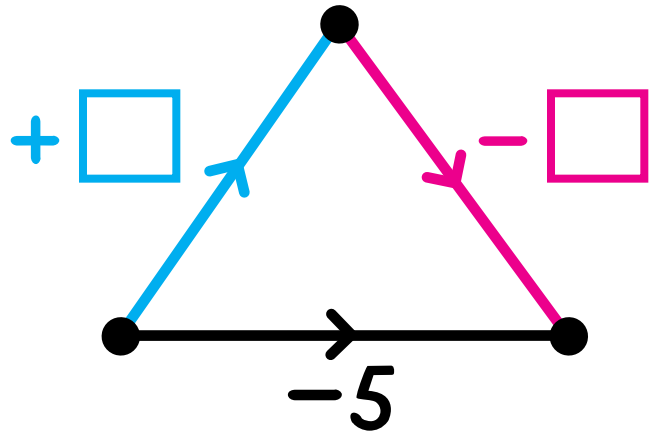
Put each number on the binary abacus.



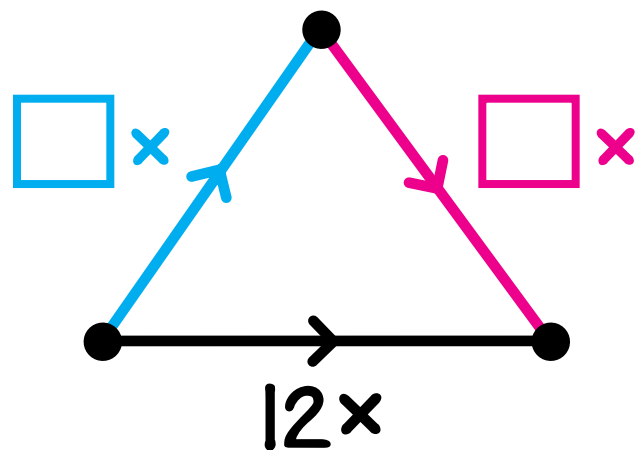
Put each number on the base-three abacus.



Fill in the boxes for the arrows. Then label the dots to check the arrows.



Note: Do not start at 0.  
0 is not much help here.





Zoe has a lemonade stand where she sells lemonade in quantities of 80 milliliters, which she finds to be the most popular size. One day she can only get cups that hold 120 milliliters and cups that hold 200 milliliters, so she buys some of both sizes. How can Zoe use the pitcher of lemonade, a 120 ml cup, and a 200 ml cup to measure 80 ml of lemonade? Explain.

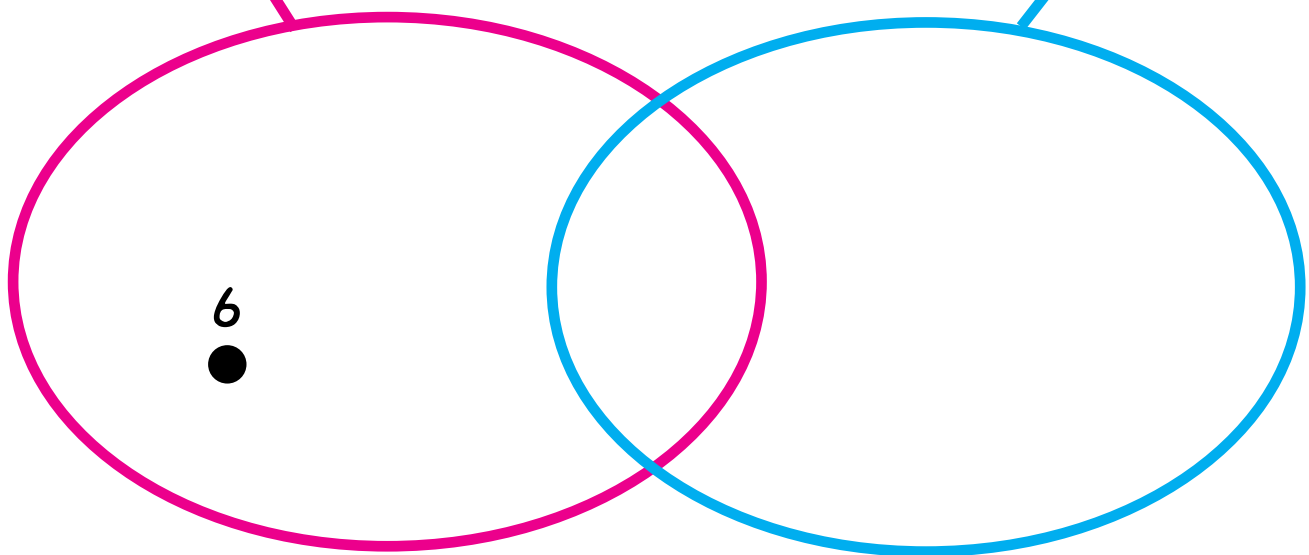
The red label is one of these:

- Positive prime numbers
- Positive divisors of 20
- Multiples of 4
- Greater than  $\widehat{10}$
- Less than 40
- Positive divisors of 24

The blue label is one of these:

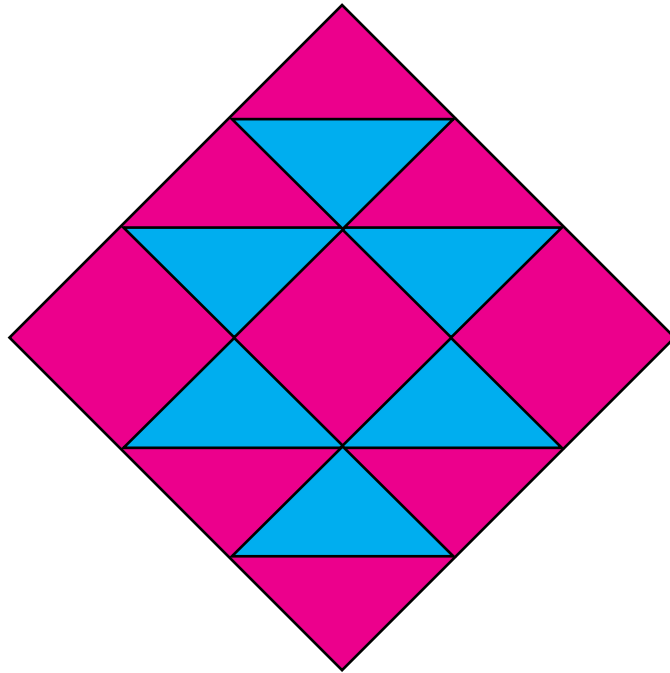
- Positive prime numbers
- Positive divisors of 20
- Multiples of 4
- Greater than  $\widehat{10}$
- Less than 40
- Positive divisors of 24

Label the strings.

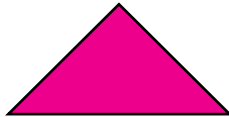


5  
●

22

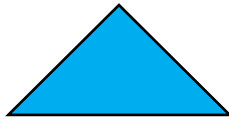


How many pieces of this size

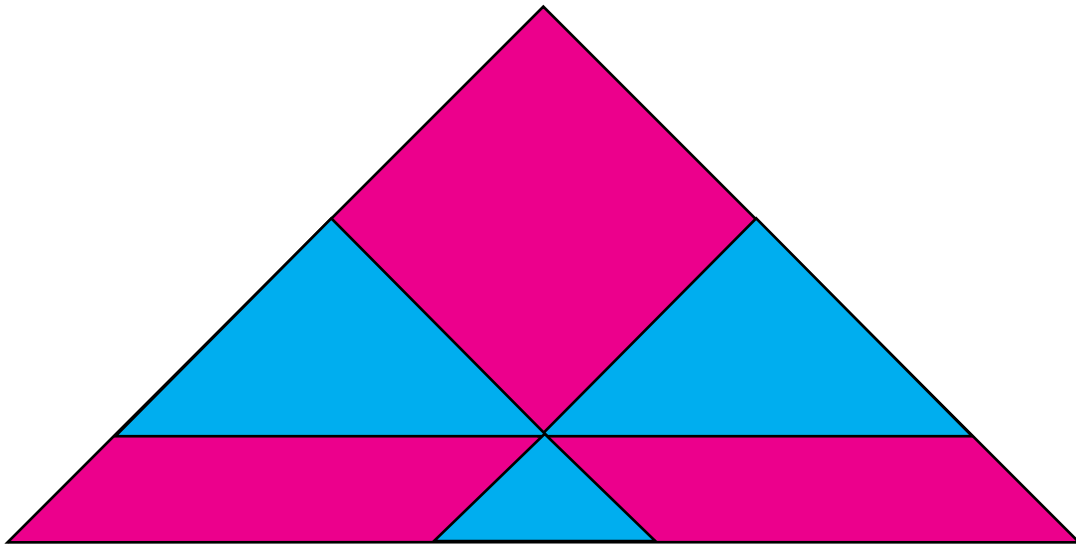


fit into the red region? \_\_\_\_\_

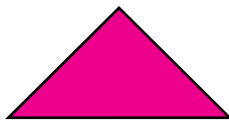
How many pieces of this size



fit into the blue region? \_\_\_\_\_

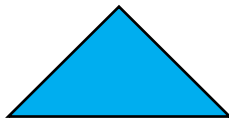


How many pieces of this size



fit into the red region? \_\_\_\_\_

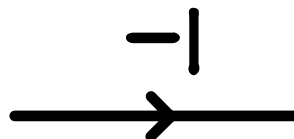
How many pieces of this size



fit into the blue region? \_\_\_\_\_

Build an arrow road between these pairs of numbers.  
Use at most three of these arrows in each road.

is a divisor of



5 ●

● 99

---

10 ●

● 63

---

7 ●

● 100

---

6 ●

● 75



Fill in the boxes with one of the ten friends:

0 1 2 3 4 5 6 7 8 9

$5 \oplus 1 = \square$

$8 \otimes 8 = \square$

$7 \oplus 4 = \square$

$3 \otimes 7 = \square$

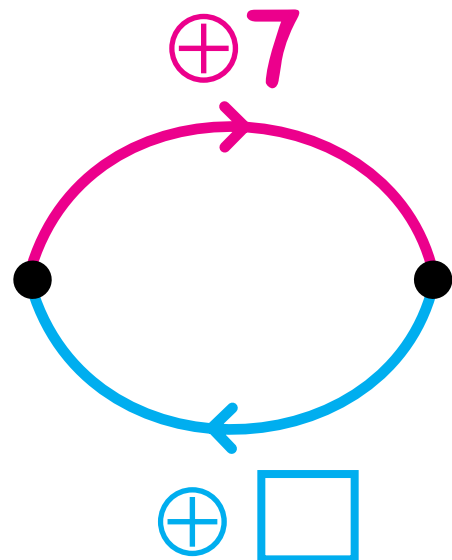
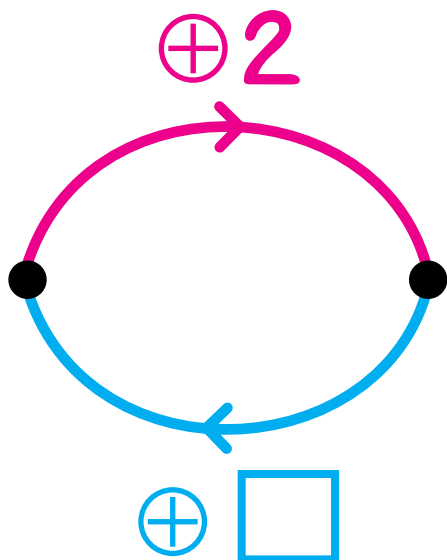
$6 \oplus 6 = \square$

$4 \otimes 7 = \square$

$8 \oplus 7 = \square$

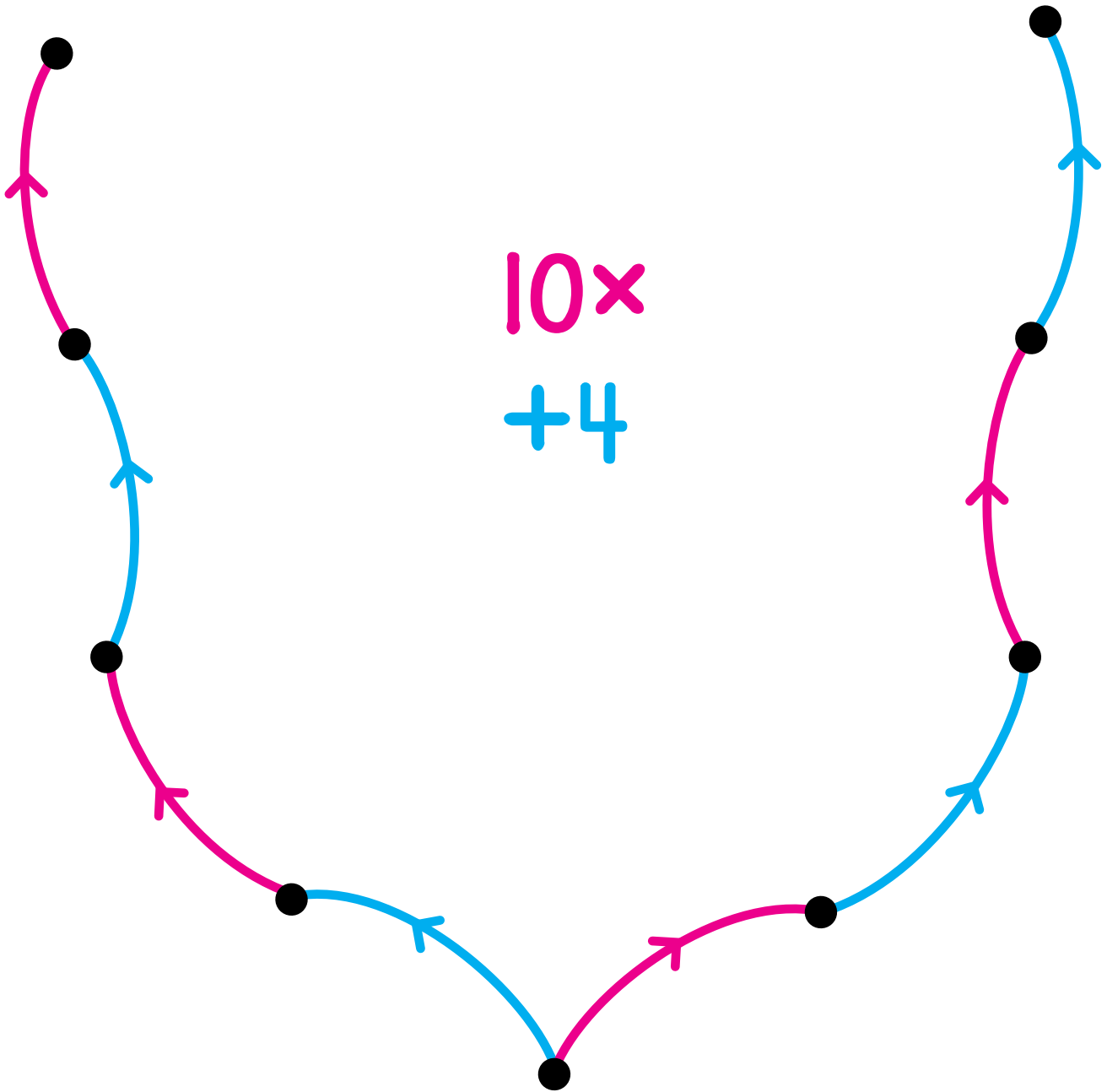
$1 \otimes 9 = \square$

Fill in each box with one of the ten friends.



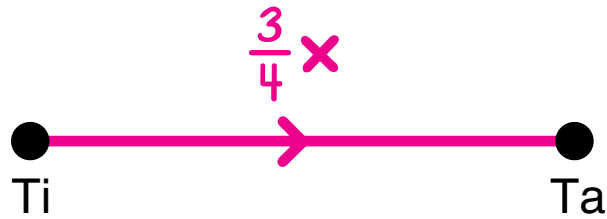
In this picture, all of the dots are for positive numbers and 685 is the greatest number.

Put 685 in the picture and label all of the dots.



Ti and Ta are two secret whole numbers.

Clue 1



Complete this chart with some possibilities of Ti and Ta.

<b>Ti</b>									
<b>Ta</b>									...
<b>Ti+Ta</b>									

What do you notice about (Ti + Ta)? Write your answer below.

---

Clue 2

$$Ti + Ta = 42$$

Who is Ti? \_\_\_\_\_

Who is Ta? \_\_\_\_\_

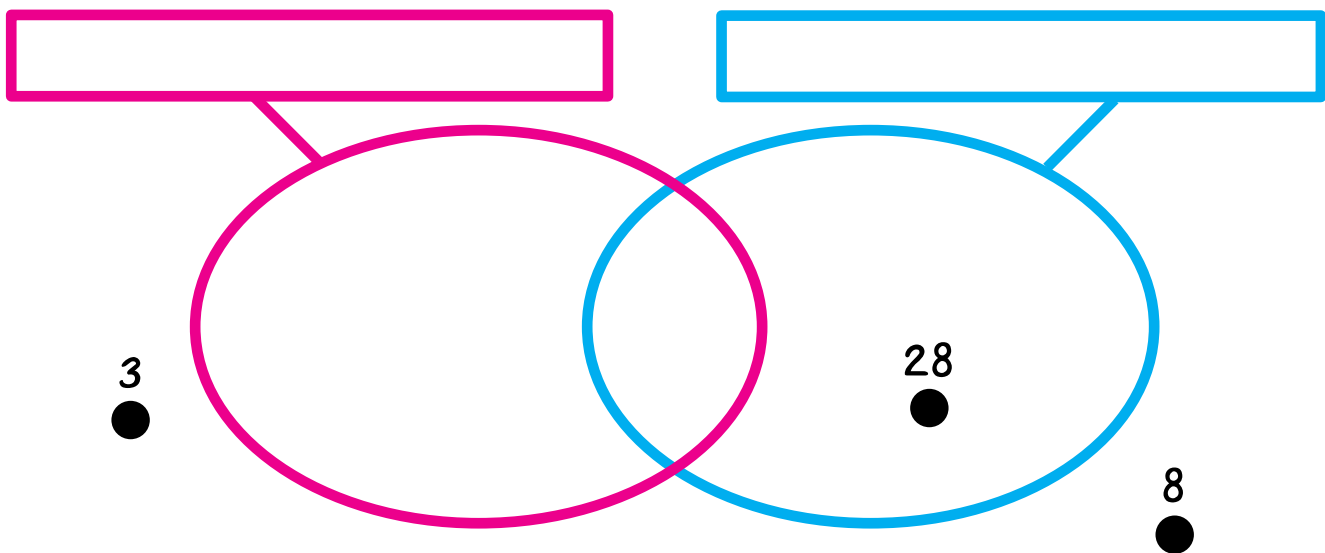
The red label is one of these:

The blue label is one of these:

<b>Odd numbers</b>
<b>Positive prime numbers</b>
<b>Positive divisors of 30</b>
<b>Positive divisors of 56</b>
<b>Greater than <math>\widehat{10}</math></b>
<b>Less than <math>\widehat{10}</math></b>
<b>Multiples of 3</b>
<b>Multiples of 7</b>

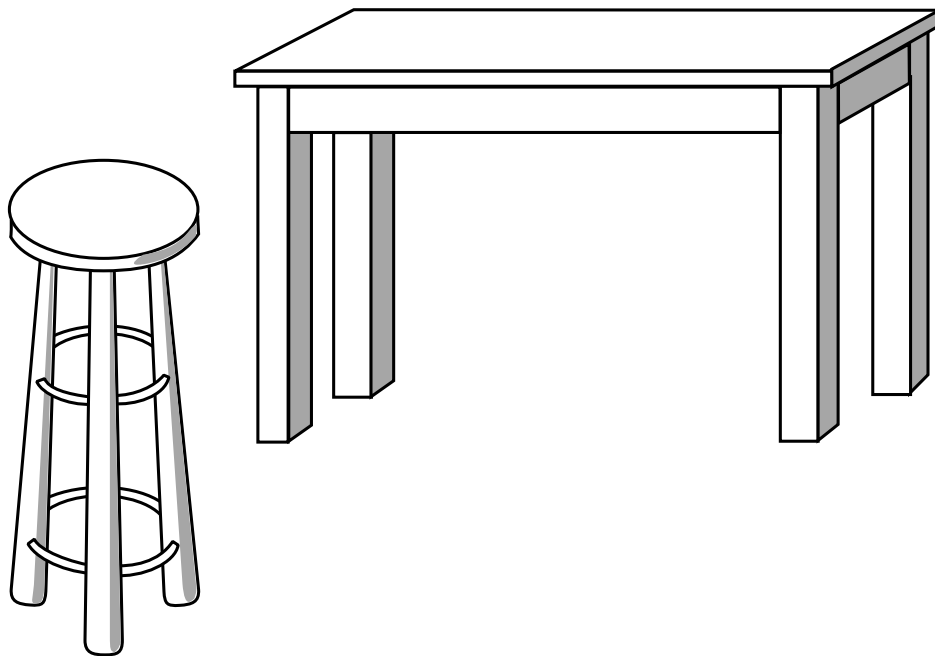
<b>Odd numbers</b>
<b>Positive prime numbers</b>
<b>Positive divisors of 30</b>
<b>Positive divisors of 56</b>
<b>Greater than <math>\widehat{10}</math></b>
<b>Less than <math>\widehat{10}</math></b>
<b>Multiples of 3</b>
<b>Multiples of 7</b>

Label the strings.

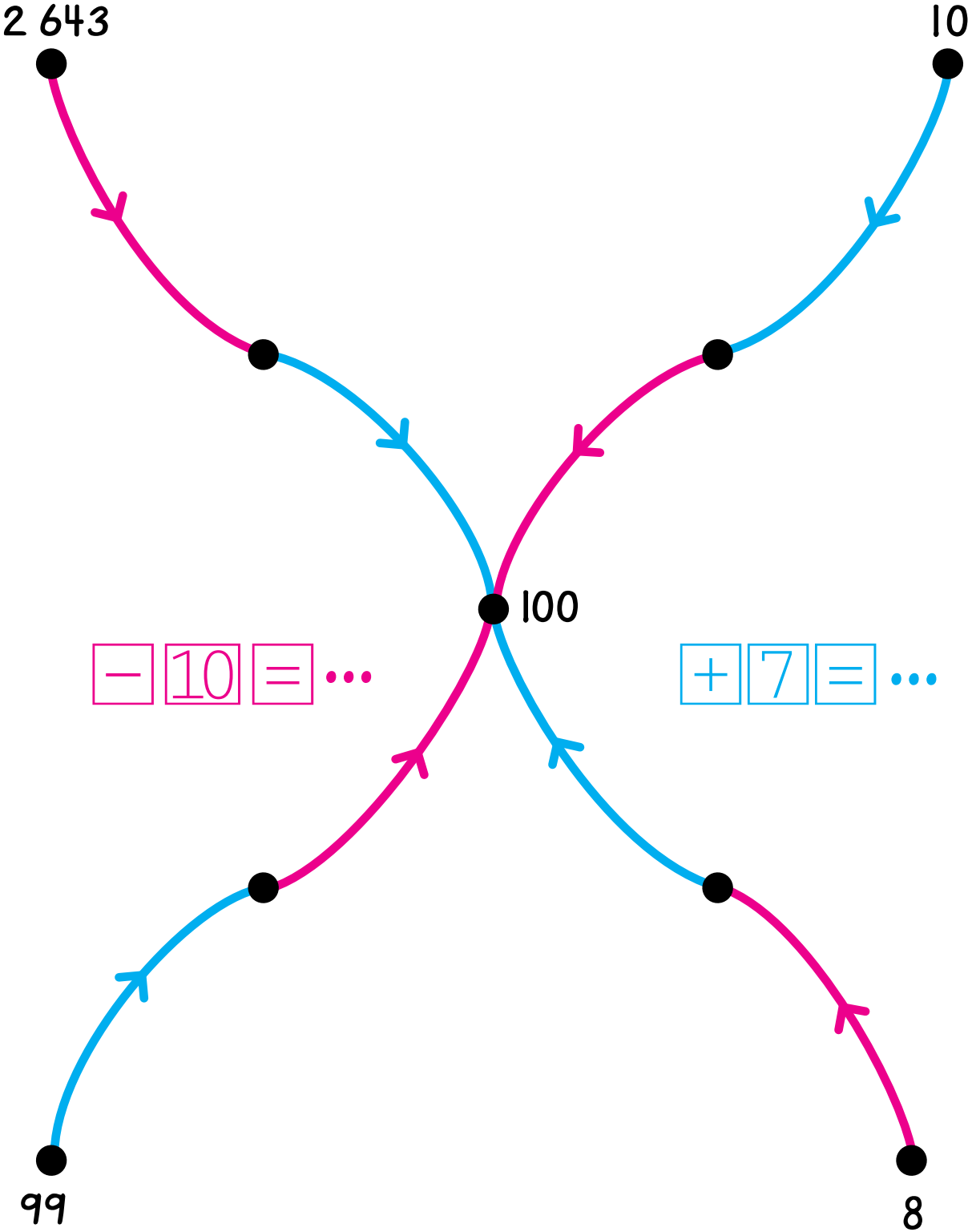


28

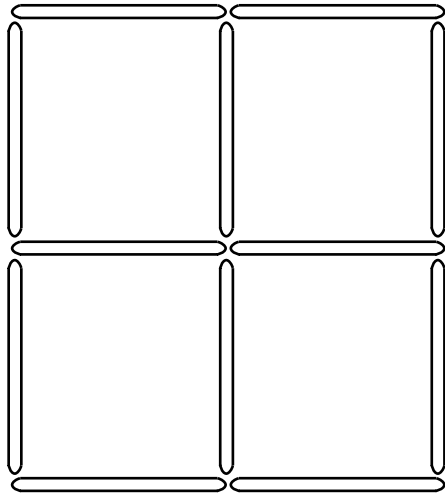
Ms. Samuel has a carpenter shop where she makes only 3-legged stools and 4-legged tables. Today she used 37 legs. How many stools and how many tables did she make today? Find as many solutions as possible.



Label the dots. Many solutions are possible.



Here are 12 toothpicks forming four small squares.

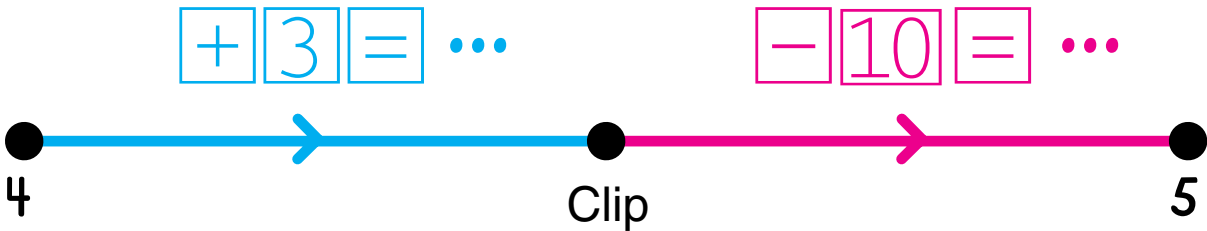


Move exactly three toothpicks to form three squares using all 12 toothpicks.

Draw your solution below.

Clip is a secret number.

Clue 1



Clip could be \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and so on.

Clue 2

Clip is between 600 and 700.

Clip could be \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_.

Clue 3

Clip is a square number.

Who is Clip? \_\_\_\_\_