CSMP Mathematics for the Upper Primary Grades, Part II

Blacklines

Note: This packet contains blackline masters for home activities, parent letters, and numerous activities that coordinate with *CSMP Mathematics for the Upper Primary Grades, Part II*. There are no limits to the number of times these blacklines may be reproduced.

The first blackline is a letter to introduce parents! guardians to *CSMP*. Next is the Home Activity section, which also begins with an introductory letter to parents/guardians. Subsequent home activities may be reproduced and cut off, one at a time, and sent home as appropriate. The remaining blacklines coordinate with lessons in the four strands, N, L, G, and W. They are organized in order, by strand.

McREL

Dear Parent/Guardian:

Activities that accompany various lessons in our mathematics program (*CSMP Mathematics for the Upper Primary Grades*) will be sent home with your child periodically. They will be called "home activities" rather than "homework," because we hope you will use them as an opportunity to become involved with your child in learning more about the *CSMP* tools, methods, and skills.

Some home activities will be follow-up or practice for a class lesson; others will be for enrichment or extension. Please keep all the activities and materials in the envelope provided. Some materials may be used more than once, and you may want to refer back to previous activities.
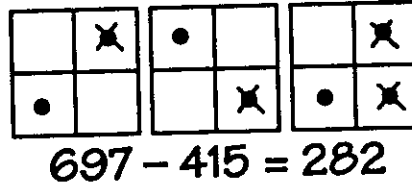
Sincerely,

N1

We have been using the Minicomputer to help us with subtraction problems. You can work with your child to practice subtraction on the Minicomputer at home. Put on the first number and then take away checkers to subtract the second number. In this example, the X's show checkers taken away.

$$697 - 415 = ?$$

$$697 - 415 = 282$$

Try these or other subtraction problems.

$$53 - 40 = ?$$
$$951 - 841 = ?$$

$$278 - 230 = ?$$
$$326 - 124 = ?$$

N7

Ask your child how to build an arrow road between two numbers. Here are a couple arrow road problems to do with your child.

1) Build an arrow road starting at 9, using three +10 arrows and two –1 arrows. What is the ending number?

2) Build an arrow road starting at 17, using five arrows (+10 or –1). What is the ending number?

N10

This is an example of an arrow road from 1 to 13 using 2x and +1 arrows. This road has seven arrows.
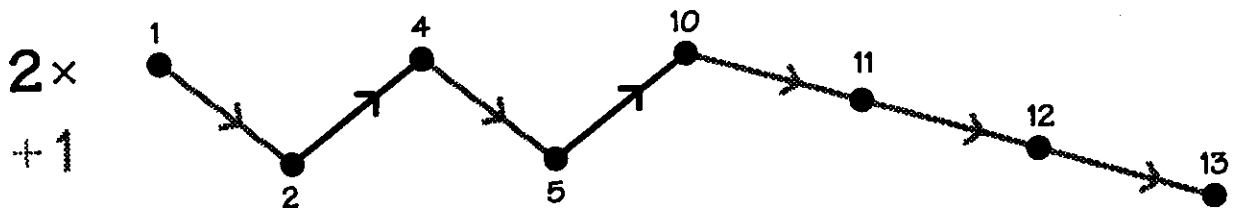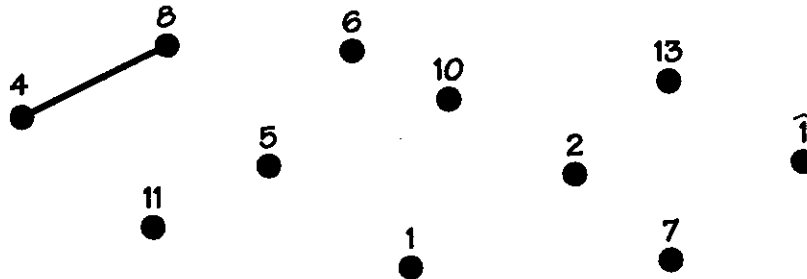
With your child:

- Try to build an arrow road from 1 to 13 with fewer 2x and +1 arrows.
- Build an arrow road from 5 to 50 using 2x and +1 arrows.
- Can you build an arrow road from 5 to 50 with fewer 2x and +1 arrows?

N11

Ask your child to tell you about number friends. Two numbers are 12-friends if you can add the two numbers and get 12. For example, 4 and 8 are 12-friends. With your child, draw cords (connecters) in this picture for 12-friends.

Put more numbers in the picture that are 12-friends.

You may like to play this number friends game with your child at other times and look for 20-friends, 50-friends, or 100-friends.

N12

Try to find some things around the house that you can divide or share equally. For example:

- Divide the cards in a deck equally between two people. How many cards does each person get?
- Share 48 pretzel sticks equally between two people. How many pretzel sticks does each person get?
- Divide a candy bar equally, two ways. How can you do this?

You may also involve your child in deciding quantities when you half or double a recipe.

N13

The attached sheet has a 3x arrow road. Put 2 (or 3 or 5) at the first dot and then work with your child to label the other dots. Use your home Minicomputer or a calculator to do the calculations (3x a number).

N19

Try to find opportunities to count the amount of money in a small collection of coins (quarters, dimes, nickels, and pennies). Occasionally, ask your child to write the amount of money using a decimal number and $; for example, $1.15 or $0.51. Also, let your child choose coins to make a given amount of money up to $2.00.

- -

N22

Find opportunities to count forward and backward by tens with your child. Start with different numbers from 0 to 9 and count forward, or with numbers between 80 and 90 and count backward. For example:

- Start with a few pennies. Then count by tens to calculate how much money (cents) is in your collection as you add dimes, one at a time. Count backward by tens as you take dimes away from the collection, one at a time.
- Teach a calculator to count by tens:
  1) Put on the starting number.
  2) Press ⊞①⓪.
  3) Then, press ⊟⊟⊟ and so on.

  The calculator will count backward by tens if you use ⊟ rather than ⊞ in step 2.

- -

N25

Your child has made an arrow road picture with alternating +10 and −1 arrows. Put a number such as 1, 3, 5, or 7 at the starting dot of the road, and work with your child to label the other dots. Draw as many +9 arrows as you can in the picture.

- -

N28

Use a counting calculator with your child to practice counting backward by fives and by tens, starting at numbers such as 127 or 154.

To teach a calculator to count backward by fives or by tens:
  1) Put on the starting number.
  2) Press ⊟⑤ or ⊟①⓪.
  3) Then, press ⊟⊟⊟ and so on.

N29

Find opportunities to identify coins, and practice finding the amount of money in a small collection of coins. Occasionally, ask your child to write an amount of money using a decimal number and $. Let your child select coins to make a given amount of money up to $2.00, and sometimes ask for more than one way to do this.

Try this problem with your child:

> Luke has a half-dollar. He finds several baseball cards he would like to buy. The prices of the cards are in this string picture. Which cards could Luke buy? Can Luke buy two cards? Can Luke buy three cards? Can Luke spend exactly 50¢?

34¢ ●
18¢ ●   16¢ ●
15¢ ●
21¢ ●   29¢ ●
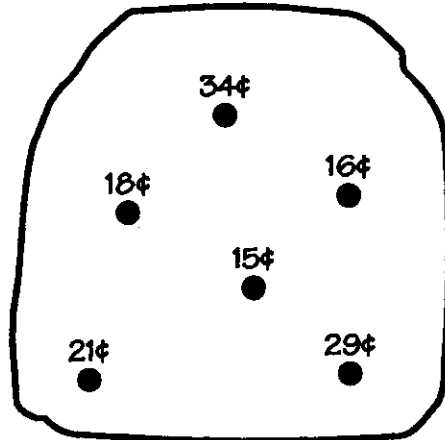
You can pose other similar problems for your child to solve, perhaps even at a store.

N32

Practice mental arithmetic with your child, adding 10 or 100 to a given number. For example, when you say a number, your child responds by adding 10 (or 100) to your number.

Try building more arrow roads with your child, this time using +1, +10, and +100 arrows. For example:

- Build an arrow road from 0 to 113 using +1, +10, and +100 arrows.
- Build an arrow road from 67 to 244 using +1, +10, and +100 arrows.
- Build an arrow road from 126 to 475 using +1, +10, and +100 arrows.

Occasionally check to see if you can build the road with fewer arrows.

N33

Practice counting an amount of money with your child. This time, use a small collection of bills (ones, fives, tens, or twenties) and find several ways to make various amounts of money such as $17 or $31.

W11

Try to find opportunities to count by tens, forward and backward, with your child. For example:

- Start with some number of pennies such as 7. Then count the amount of money (cents) you have as you add dimes to the pile, one at a time. Count backward as you take away dimes, one at a time.
- Teach a calculator to count by tens and follow the count by predicting the next number each time.
    1) Put on the starting number.
    2) Press $\boxed{+}\boxed{1}\boxed{0}$.
    3) Then, press $\boxed{=}\boxed{=}\boxed{=}$ and so on.
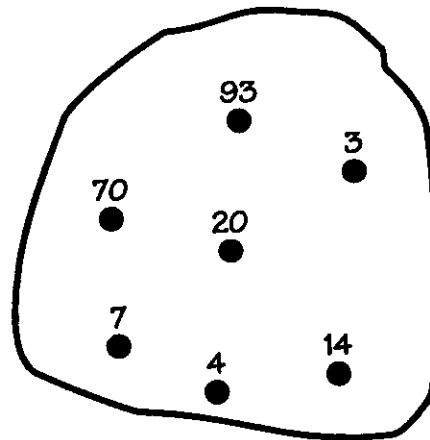
Use a variety of starting numbers.

W13

Here is a money puzzle for you to solve with your child. Place all the numbers from the string into the story so that it makes sense.

Darcy is counting her coins. She has _____ pennies. She has _____ nickels, or _____¢ in nickels. She has _____ dimes, or _____¢ in dimes. Altogether, Darcy has _____ coins and _____ ¢.

You may like to use coins to check your solution.

93

3

70

20

7

4

14

L6

Each day during the month of March, record with your child the morning (or evening) temperature in both degrees Fahrenheit and degrees Celsius. If you have an outdoor thermometer, read your thermometer to get these temperatures. Otherwise, you can get temperatures from the newspaper or a news program. Try to get the temperature at approximately the same time each day, so you can observe changes during the month.
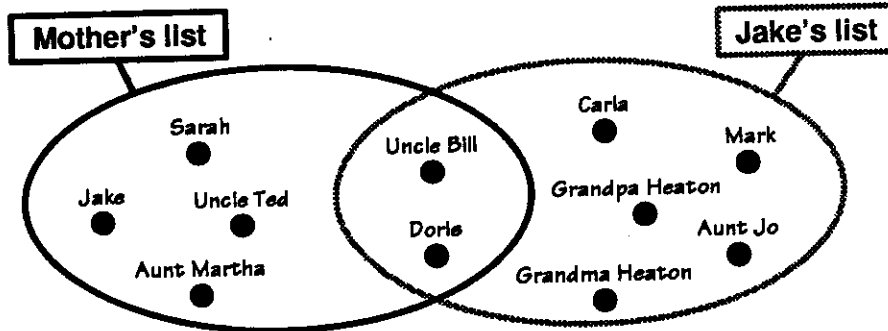
L8

Try to find opportunities to count by twos, threes, fives, and tens with your child. Use some previous suggestions for counting. We are beginning to use the term *multiples of 2* (3, 5, 10) to describe the numbers we say when we count forward or backward by twos (threes, fives, tens) from 0.

L12

Your child is going to ask two members of the family to each prepare a list of 5–10 names of friends or relatives. With your child, draw a string picture showing the names on both lists and the names common to both lists. For example,

Mother's list **Jake's list**

Sarah, Uncle Bill, Carla, Mark, Jake, Uncle Ted, Grandpa Heaton, Doris, Aunt Jo, Aunt Martha, Grandma Heaton

Note that there are six names on Mother's list and seven names on Jake's list, but only eleven different names altogether.

L13

With your child, practice making various amounts of money (up to $1.00) using half-dollars, quarters, dimes, nickels, and pennies. Try to find several ways to make a given amount. Use coins to practice counting by fives, tens, and twenty-fives.

G1

Your child is bringing home two pieces of string and a recording chart. One piece of string is 100 cm and the other is 10 cm. Please work with your child to find things in the house to measure. Record objects in the chart that are about 100 cm long and that are about 10 cm long.


G5

Ask your child to tell you about Nora's neighborhood. Then pose the following problem and work on it with your child.

- Nora's house is at **N**.
- A shortest walk from Nora's house to Sandy's house is 5 blocks. Draw dots at the places where Sandy's house could be.
- If Sandy walks from her house to Nora's house, she can go 3 blocks north and 2 blocks east.
- Circle the dot for Sandy's house.

G11

Please help your child identify some of the following solids in objects around the house.

Sphere   Hemisphere   Cylinder   Cube   Cone   Rectangular prism   Triangular prism

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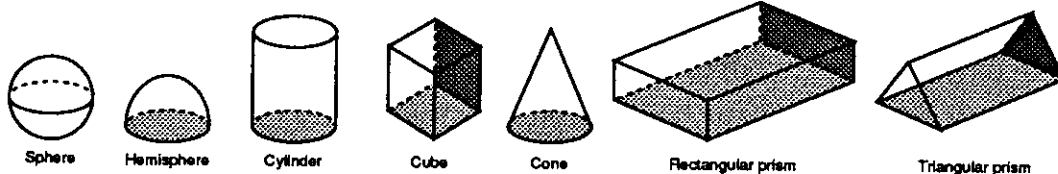
W9

You may like to use a calculator to practice mental arithmetic with your child. Try the following:

- Check that 0 is on the display of the calculator.
- Cover the display with your hand.
- Tell your child to be like the calculator and do what the calculator does as you press keys.
- Slowly press ⊞ ⑤ ✕ ② ⊞ ① ⊟.
  What number will be on the display? (11) Check.
- Remember that 11 is on the display and cover it again.
  Slowly press ⊞ ③ ⊟ ④ ⊡ ② ⊟.
  What number will be on the display? (5) Check.

Continue with other short sequences of calculations.
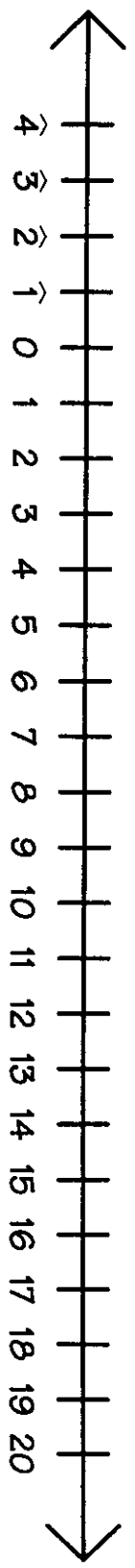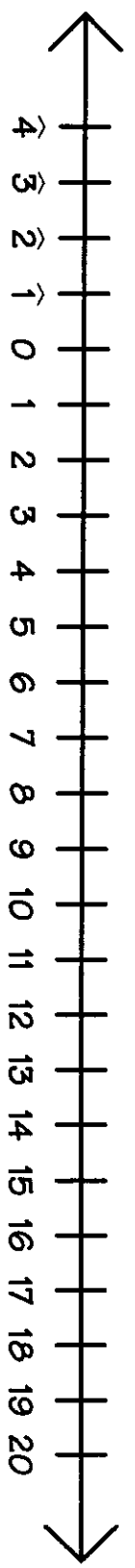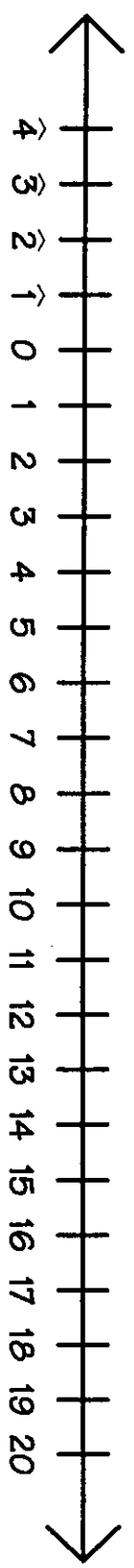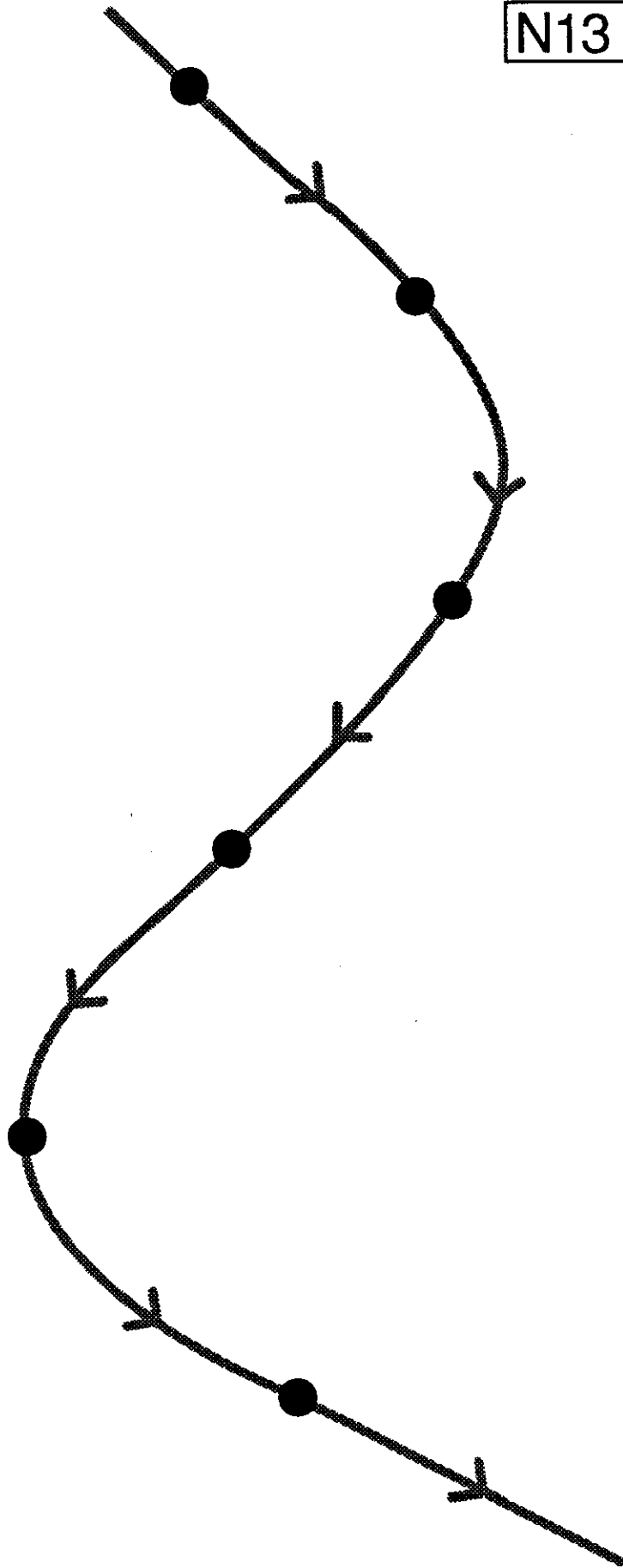
Dear Parent/Guardian,

We have recently extended the Minicomputer to include decimal places. Please review our earlier letter on the Minicomputer. Now we put a bar to the right of the ones board, and place boards to the right of the bar for decimal places. Most of the situations where we use decimal numbers involve money, so these boards are called the dimes (tenths) and pennies (hundredths) boards. For example,
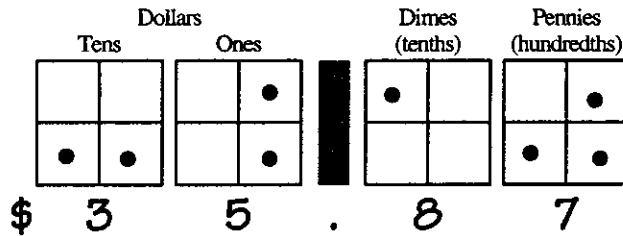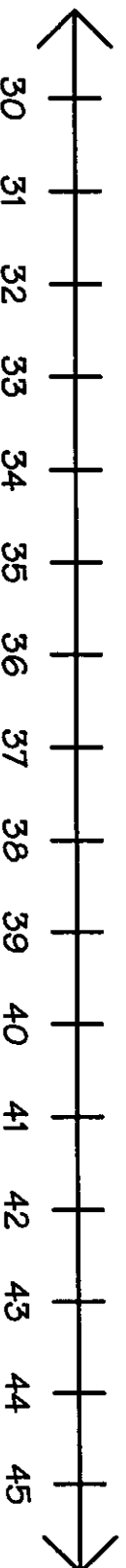
The trades we make on these new boards are just like those on the boards for ones, tens, hundreds, and so on.

You can similarly extend use of your home Minicomputer. Place a divider between two Minicomputer boards, and use the Minicomputer to represent decimal numbers and to do calculations with decimal numbers. For example, ask your child to count the amount of money in a small collection of coins. Then represent that amount of money on the Minicomputer. Add some coins to the collection, and find the new amount of money by adding on the Minicomputer. Or take some coins away from the collection and find the new amount of money by subtracting on the Minicomputer.

We hope you will enjoy using the Minicomputer to work with decimal numbers.

Sincerely,

N27

```
   0      15      30
   1      16      31
   2      17      32
   3      18      33
   4      19      34
   5      20      35
   6      21      36
   7      22      37
   8      23      38
   9      24      39
  10      25      40
  11      26      41
  12      27      42
  13      28      43
  14      29      44
  15      30      45
```

24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
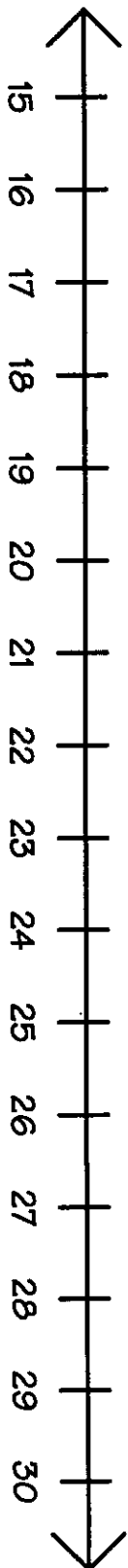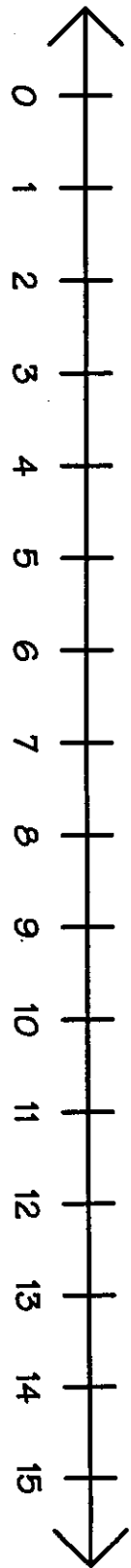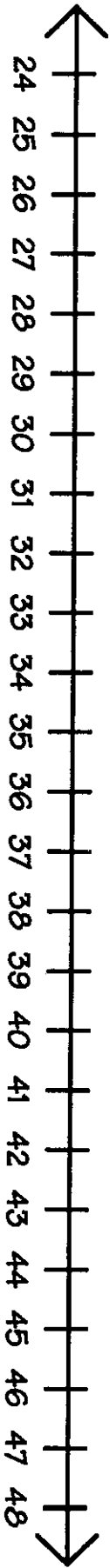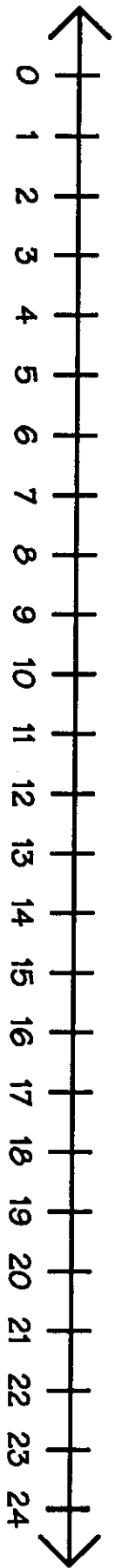
St. Louis Temperature Data

January

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
						1.
2.	3. 2°C	4. 2°C	5. 0°C	6. 3°C	7. 10°C	8.
9.	10. 7°C	11. 5°C	12. 6°C	13. 6°C	14. 10°C	15.
16.	17. 18°C	18. 16°C	19. 12°C	20. 7°C	21. 5°C	22.
23.	24. 5°C	25. 0°C	26. 1°C	27. 5°C	28. 20°C	29.
30.	31. 12°C					

February

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
		1. 8°C	2. 2°C	3. 2°C	4. 3°C	5.
6.	7. 1°C	8. 5°C	9. 6°C	10. 9°C	11. 10°C	12.
13.	14. 7°C	15. 1°C	16. 4°C	17. 1°C	18. 4°C	19.
20.	21. 10°C	22. 17°C	23. 12°C	24. 7°C	25. 8°C	26.
27.	28. 2°C					

January

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
						1.
2.	3. 4°C	4. 8°C	5. 11°C	6. 12°C	7. 12°C	8.
9.	10. 2°C	11. 1°C	12. 4°C	13. 8°C	14. 14°C	15.
16.	17. 3°C	18. 2°C	19. 5°C	20. 2°C	21. 2°C	22.
23.	24. 9°C	25. 2°C	26. 3°C	27. 15°C	28. 15°C	29.
30.	31. 4°C					

February

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
		1. 2°C	2. 3°C	3. 10°C	4. 18°C	5.
6.	7. 0°C	8. 6°C	9. 9°C	10. 5°C	11. 9°C	12.
13.	14. 6°C	15. 10°C	16. 3°C	17. 5°C	18. 14°C	19.
20.	21. 4°C	22. 8°C	23. 20°C	24. 13°C	25. 11°C	26.
27.	28. 7°C					

Temperature Chart

Degrees Celcius

20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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19
20

Temperature Chart

Degrees Celcius

20
19
18
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9
8
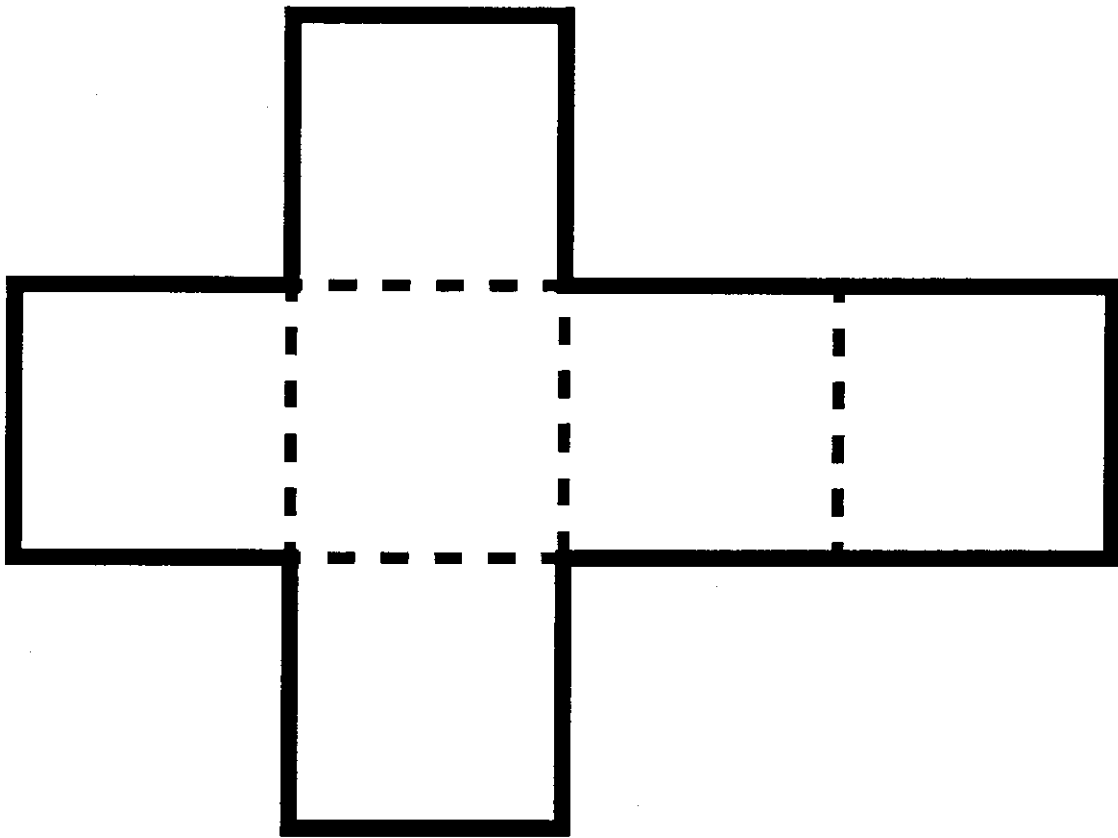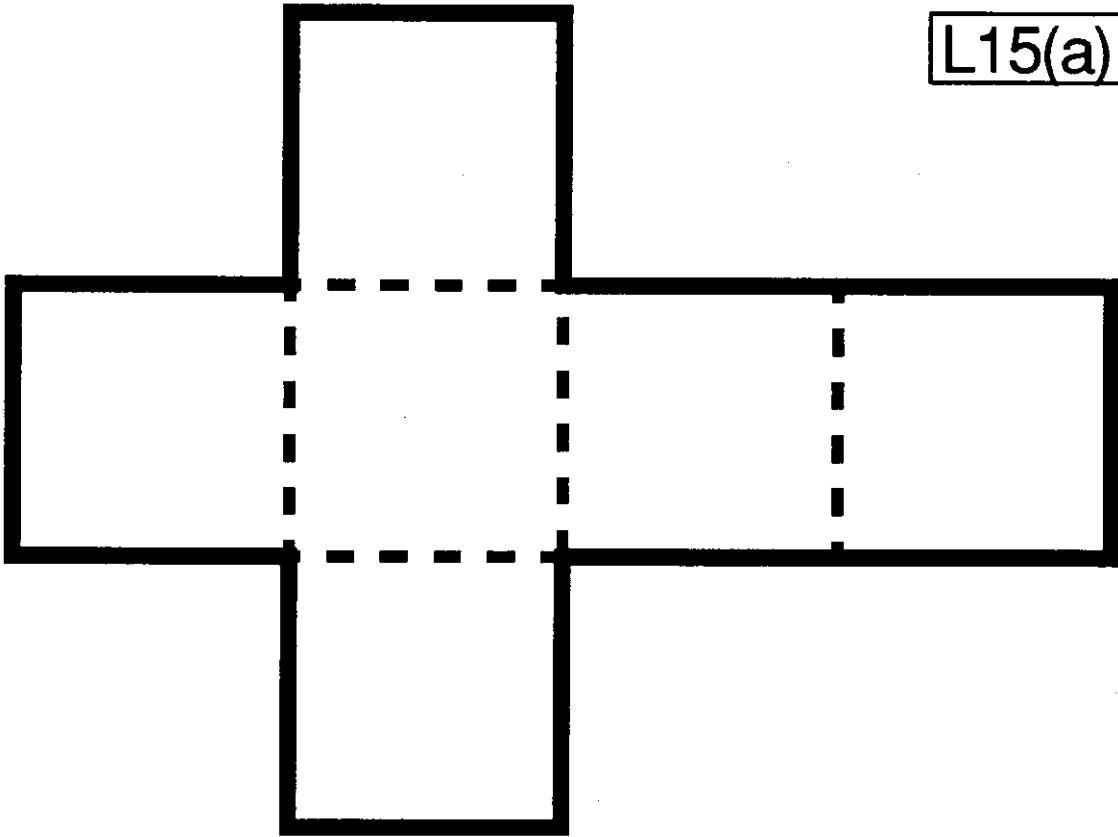7
6
5
4
3
2
1
0
1
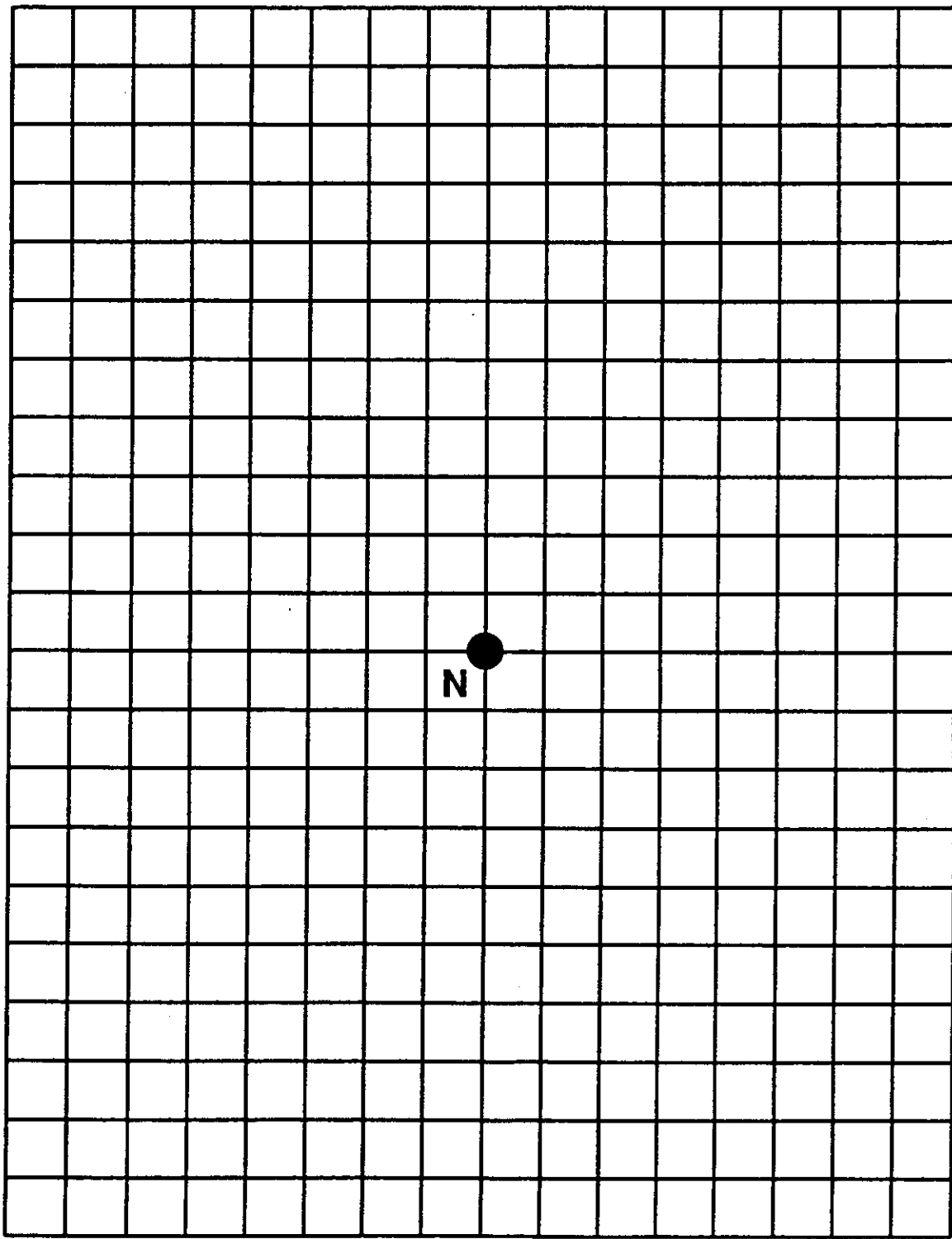2
3
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Sums
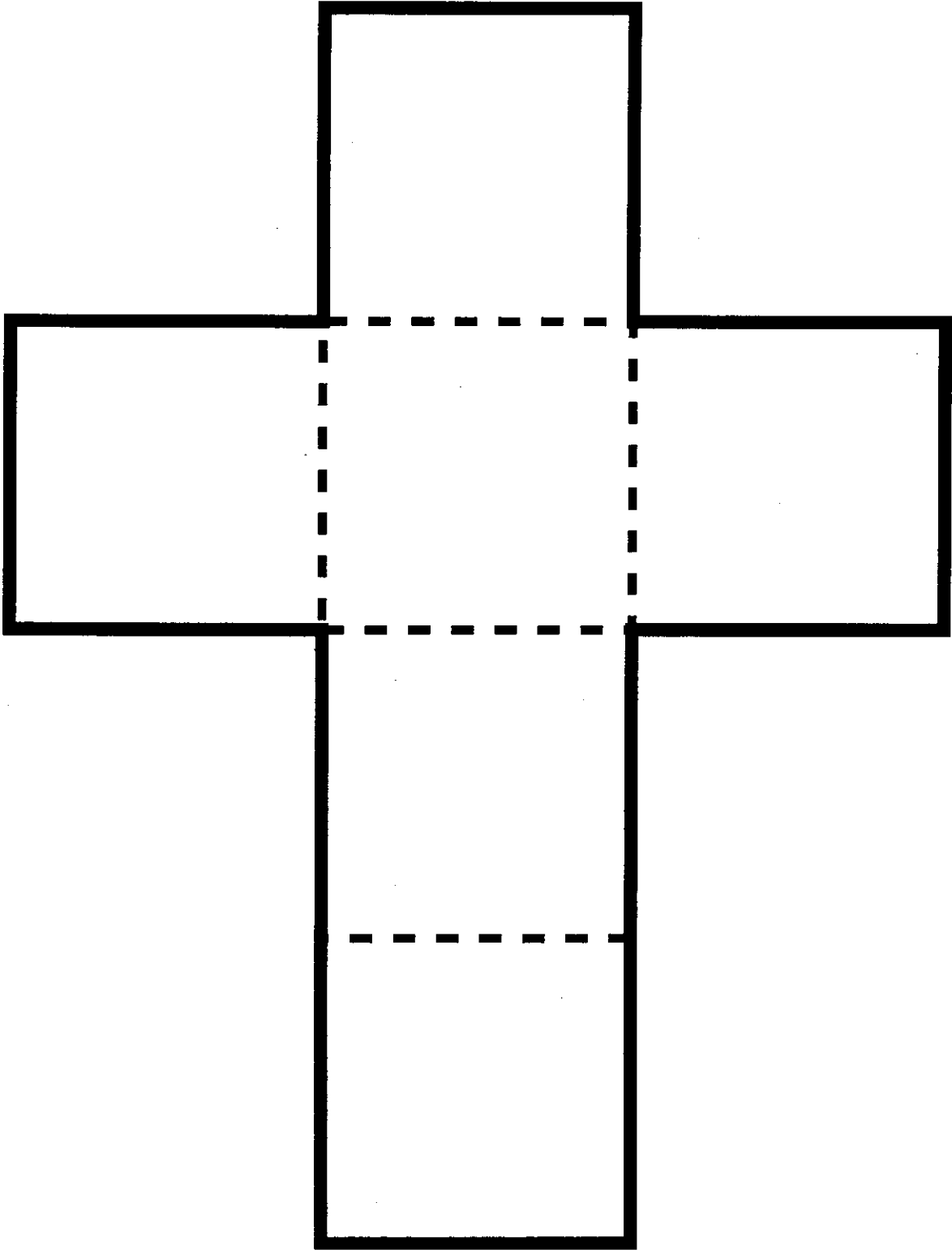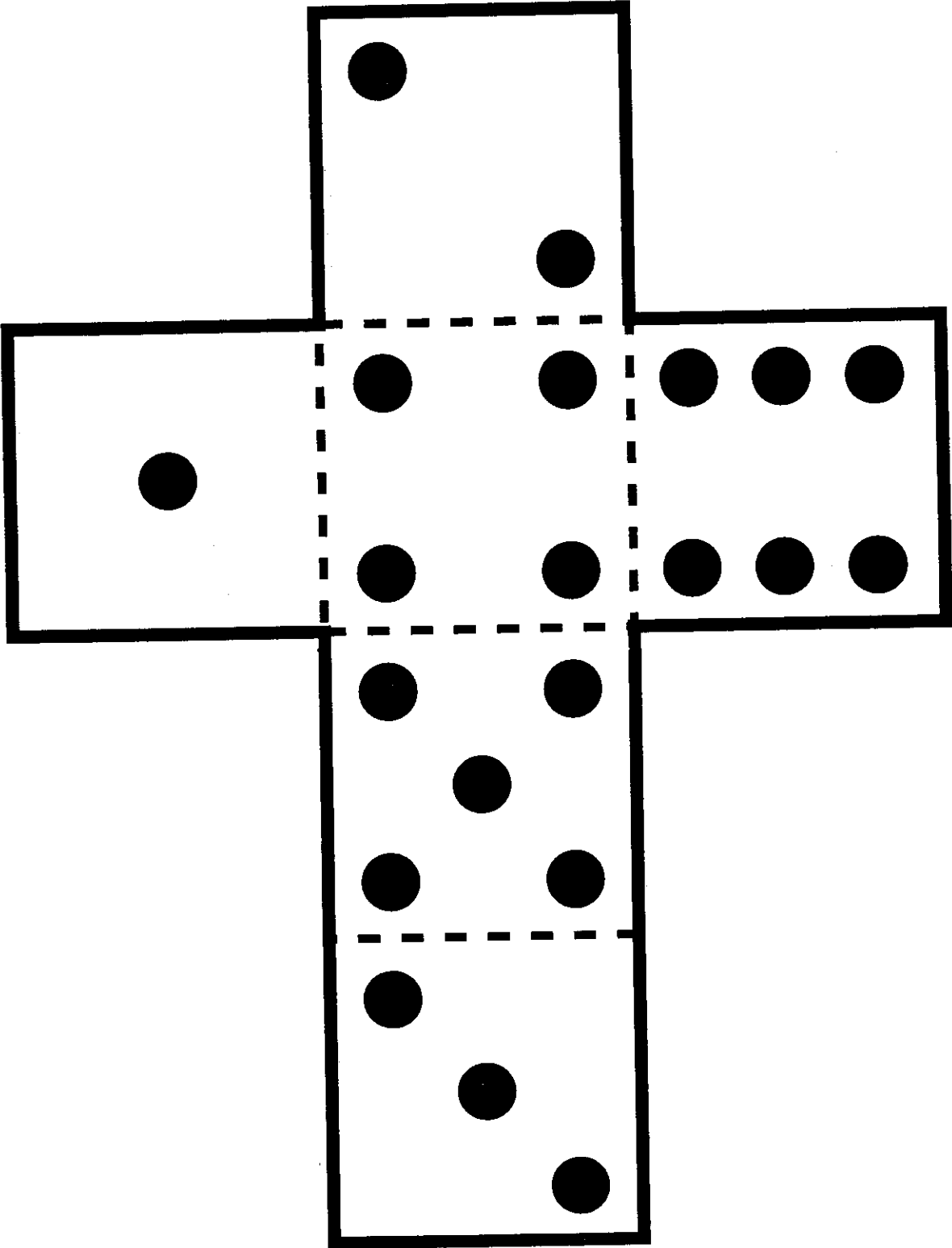
Use a tape measure, or strings cut to 100 cm and 10 cm, to measure objects and record them in this chart.
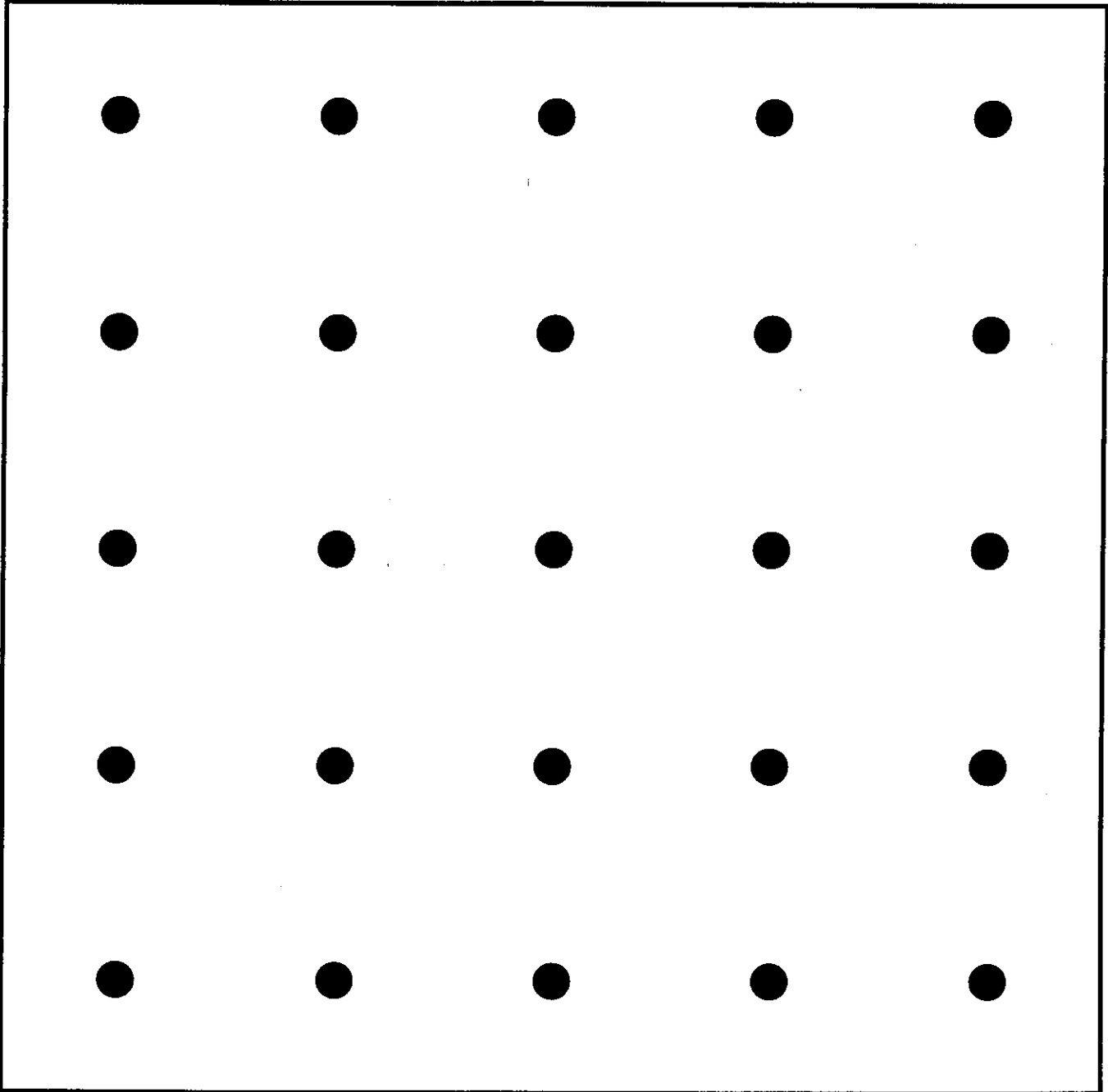
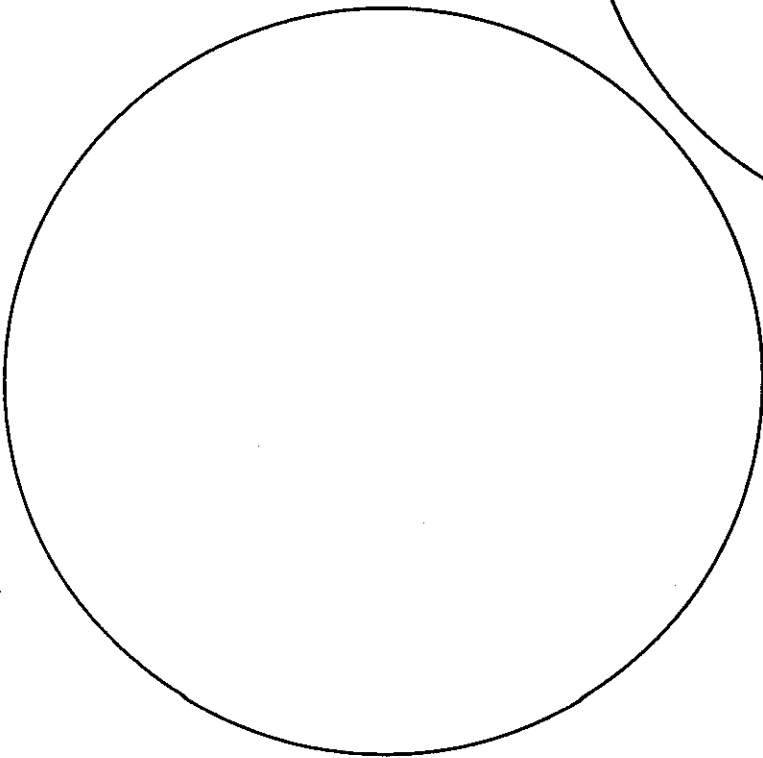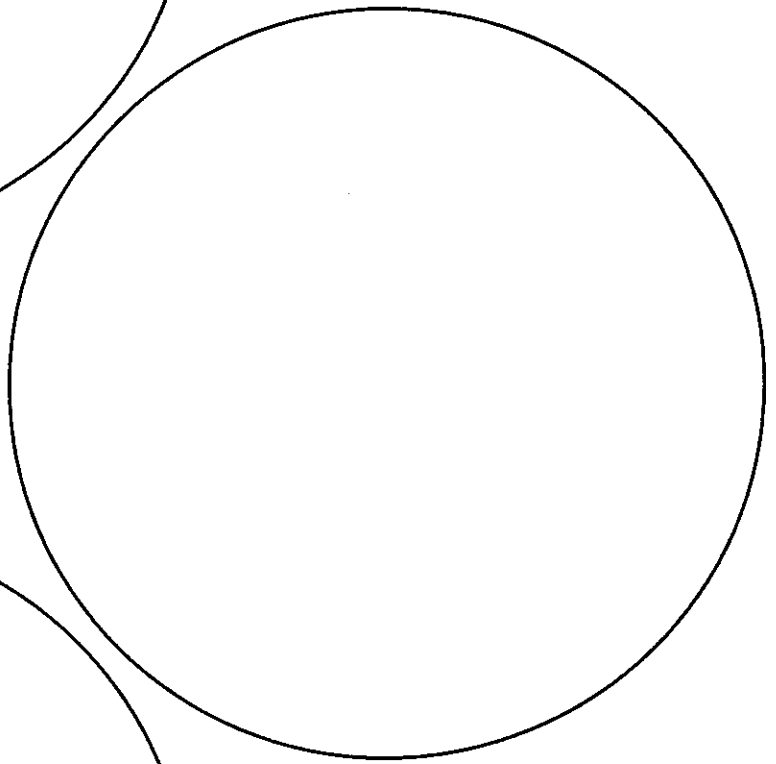| About 100 cm long	About 10 cm long

North

West

East

N

South
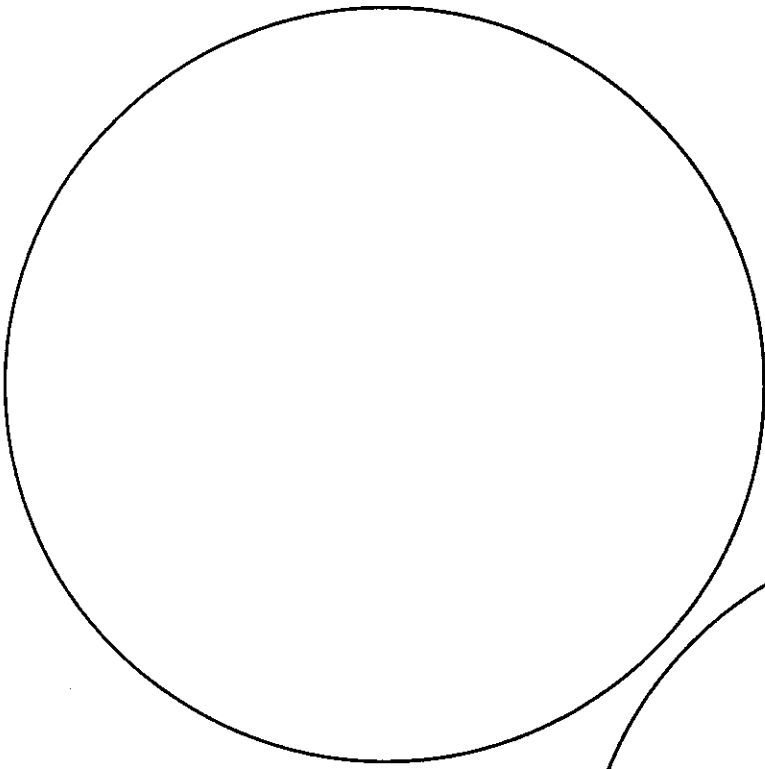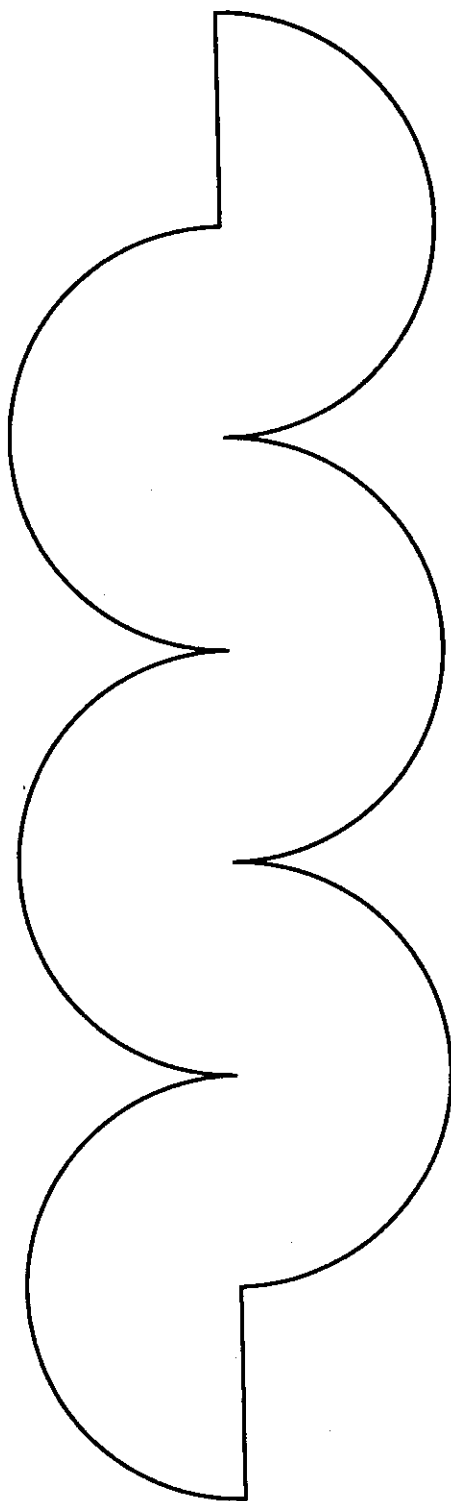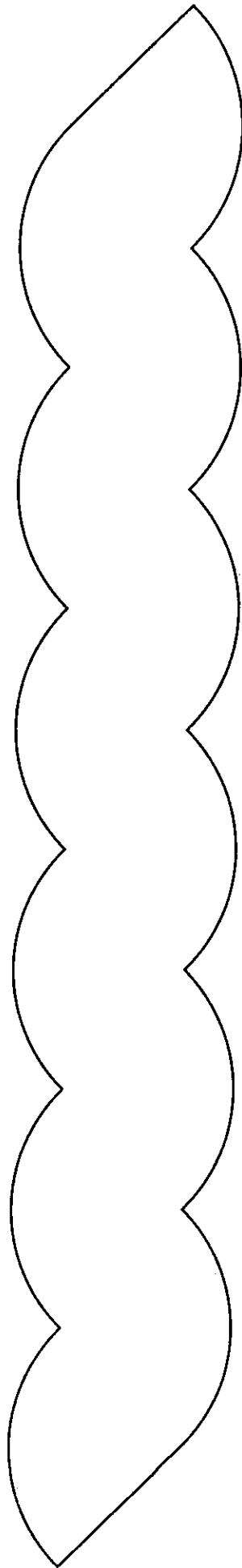
Caravan of Problems #1

(12-5536R)

Student Name _____

Date _____

Responses

Counting/Sequence/Order	p.5	(number line 65–201)	25	_____
	p.8	(before, after, place value)	9	_____
	p.18	(tally marks graph)	7	_____
	p.22	(<, >, =, frames)	11	_____
Arrows	p.2	(+2)	15	_____
	p.4	(+3, facts)	18	_____
	p.6	(−2, facts)	15	_____
	p.10	(+2, +4, facts)	9	_____
	p.12	(2x, facts)	21	_____
	p.14	(−10, facts)	12	_____
	p.17	(+3, −1 arrow road)	various	_____
	p.19	(+10, facts)	15	_____
	p.21	(+5, facts)	20	_____
	p.23	(+5, −2)	14	_____
	p.28	(+$\hat{1}$, facts)	19	_____
	p.30	(½x, facts)	10	_____
Minicomputers	p.3	(1–99)	8	_____
	p16	(100–999)	8	_____
	p.25	(1–999)	8	_____
	p.29	(1–1200)	6	_____
	p.31	(50, 99)	8	_____
Money	p.7	(1¢, 5¢, 10¢, 25¢ story problem)	6	_____
	p.27	(1¢, 5¢, 10¢, 25¢)	6	_____
Strings	p.15	(people attributes)	4	_____
	p.29	(less than 10, even)	8	_____
Addition/Subtraction	p.11	(negative numbers)	6	_____
	p.24	(story problem)	6	_____
	p.26	(letter values)	5	_____
	p.32	(story problem)	6	_____
Geometry	p.9	(symmetry, one-half)	6	_____
	p.13	(area, comparison)	3	_____
	p.20	(length, comparison)	5	_____

Dear Parent/Guardian:

With this letter, we are sending home your child's *Caravan of Problems #1* Workbook. It contains pages with problems from various areas of our mathematics curriculum. During the past couple weeks, the students have been working independently in this booklet.

Please be aware that the workbook pages become progressively more difficult. Time constraints and individual understanding, skills, and experiences will influence how much of the booklet a student completes. We do not expect every student to complete every page, especially since the last one-third of the booklet is designed for extra challenge. You may wish to discuss pages that were difficult for your child or practice some of these concepts at home.

Other workbooks will be sent home later in the year. These should give you an idea of some of the topics and concepts being introduced in our mathematics curriculum as well as help you monitor your child's progress.

Sincerely,

Caravan of Problems #2

(12-5544R)

Student Name _____

Date _____

Responses

Counting/Sequence/Order	p.4	(49–203 number lines)	25 _____
(Number Line)	p.7	(place value)	14 _____
	p.18	(16–302 number lines)	25 _____
	p.25	(graph)	6 _____

Arrows	p.3	(+2 facts)	18 _____
	p.5	(−2 facts)	18 _____
	p.10	(+10, +1 arrow road)	various _____
	p.12	(2x facts)	13 _____
	p.14	(+5 facts)	14 _____
	p.16	(+10, −1, +9 facts)	21 _____
	p.19	(+10, +1 arrow road)	various _____
	p.24	(−10, +1, −9 facts)	21 _____
	p.26	(2x, 3x facts)	15 _____

Minicomputers	p.2	(1–99)	8 _____
	p.11	(100–999)	8 _____
	p.23	(1–99, neg #s)	6 _____
	p.27	(1–99 trades)	8 _____
	p.30	(2, 200 many ways)	8 _____

| Strings | p.6 | (strings, A-blocks) | 5 _____ |
| | p.13 | (even #s, more than 8) | 7 _____ |

Calculations	p.9	(story problems)	3 _____
+/−/x/÷	p.15	(two- & three-digit addition)	6 _____
	p.17	(code)	13 _____
	p.22	(facts for 9, 12, 25, 100)	12 _____
	p.29	(name values)	6 _____
	p.32	(story problems)	11 _____

Geometry	p.8	(one-half, symmetry)	6 _____
	p.20	(length)	4 _____
	p.31	(one-third, one-fourth)	4 _____

| Detective Story | p.21 | (+3, −1, odd, more than 10) | 8 _____ |
| | p.28 | (+5, +10, Minicomputer) | 8 _____ |

Fishing for Numbers, Part II
(12-5569R)

Student Name _____

Date _____

Responses

Arrows	p.2, 3	(+3)	6 _____
	p.7	(−1)	8 _____
	p.9	(more than)	3 _____
	p.11	(+10)	10 _____
	p.15	(2x)	8 _____
	p.17	(+5, −1)	7 _____
	p.19	(2x, +1)	10 _____
	p.21	(+4, negs)	5 _____
	p.23	(+2, +3)	9 _____
	p.25	(+6, −11)	6 _____
	p.26	(+15, +30)	5 _____
	p.27	(less than)	3 _____
	p.29	(½x)	8 _____
	p.31	(+10, −1)	7 _____

Minicomputers	p.4, 5	(11–207)	6 _____
	p.16	(11–150)	6 _____
	p.30	(pos. & neg. checkers)	8 _____

Strings	p.8	(even)	4 _____
	p.13	(odd, less than 10)	4 _____
	p.22	(more than 10, less than 20)	6 _____
	p.32	(less than 15, odd, mult. of 5)	8 _____

Calculations +/−/x/÷	p.6	(addition/subtraction facts)	10 _____
	p.10	(story)	6 _____
	p.12	(frames, addition)	6 _____
	p.14	(addition/subtraction)	10 _____
	p.20	(½x)	6 _____
	p.28	(story)	7 _____

| Geometry | p.18 | (length) | 4 _____ |
| | p.24 | (area) | 5 _____ |

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109