

CSMP Mathematics for the Intermediate Grades Part IV Blacklines

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

The Home Activity section 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. Then there are blacklines to coordinate with lessons in the five strands, N, L, G, P, and W organized in order, by strand. Following these are generic blacklines and forms for lesson notes.

MCREL

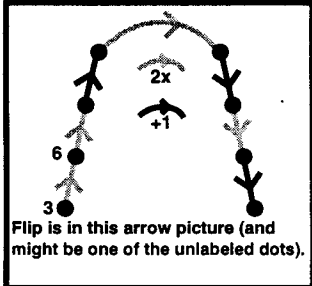
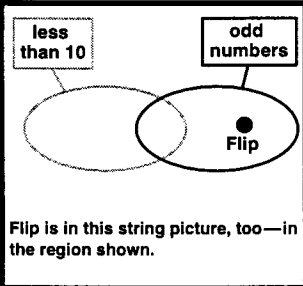
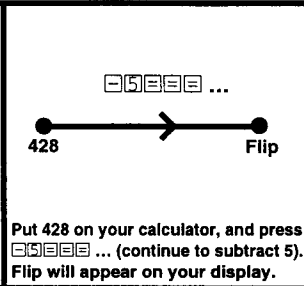
A LETTER TO PARENTS ABOUT CSMP

The *Comprehensive School Mathematics Program* (CSMP) is the mathematics program we use in your child's class. It is difficult to describe in a letter CSMP's rich and exciting way of teaching mathematics. This, however, is a short introduction to CSMP and an invitation for you to visit your child's math class.

CSMP is different because it uses several "picture" languages. These languages make it easy for children to understand some very interesting but complex mathematical ideas. Students enjoy using these picture languages. At times during the year, we will send more information about these languages with examples from our CSMP lessons.

The developers of CSMP believe that mathematics is more than just arithmetic and that students learn best when they are solving interesting problems. They believe that students should understand, enjoy, and use their skills instead of just practicing them. With CSMP, students use their arithmetic skills while they play number games, solve detective stories, or build number "roads."

CSMP students use these clues to find Flip. Can you?

| | | |
|---|--|--|
|  <p>Flip is in this arrow picture (and might be one of the unlabeled dots).</p> |  <p>Flip is in this string picture, too—in the region shown.</p> |  <p>Put 428 on your calculator, and press 5 5 5 5 ... (continue to subtract 5). Flip will appear on your display.</p> |
|---|--|--|

Children learn mathematical ideas and skills in different ways and at different times. For this reason CSMP teachers do not stick to one topic until everyone has learned it. Instead, the many concepts and skills are taught several times during the year. Students learn something during each lesson and master each skill when they are able.

In our math classes students participate in lessons with the whole class at times, with a smaller group at other times, and sometimes by themselves. Students are encouraged to talk about their ideas and to find different ways of solving a problem. The student workbooks and worksheets have easy, average, and hard pages so that all children can work on problems that are right for them.

Your child may be using a calculator for some math lessons. Calculators do not replace the need for arithmetic skills, but they do provide interesting mental arithmetic exercises. Students will use calculators to explore mathematical concepts and number patterns, or to practice math facts. They may also use calculators on problems involving tedious calculations or particularly difficult numbers.

We hope you will visit a CSMP math class soon. It can be an exciting experience.

Sincerely,

P.S. Flip, the secret number, is 13.

IG-IV HOME ACTIVITIES

Dear Parent/Guardian:

Activities that accompany various lessons in our mathematics program (*CSMP Mathematics for the Intermediate 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,

IG-IV HOME ACTIVITIES

N1

In mathematics class, we sometimes play a game called *Minicomputer Golf*. The following is a brief description of the game. Try playing it with your child.

Start with a number on the Minicomputer using several checkers, and set a target or goal.
For example:

$$\begin{array}{|c|c|c|} \hline & & \odot 2 \\ \hline & & \bullet \bullet \\ \hline & & \\ \hline \end{array} \begin{array}{|c|c|c|} \hline & \ominus & \bullet \bullet \\ \hline & & \bullet \bullet \\ \hline & & \\ \hline \end{array} = 67 \quad \text{Goal: 1000}$$

Rules: Players take turns moving just one checker from the square it's on to any other square.

A move should take the number on the Minicomputer toward the goal.

The move that reaches the goal exactly is the winning move.

Note: The $\odot 2$ -checker is a weighted checker and has the same effect as putting two regular checkers on that square. The \ominus -checker is a negative checker.

N7

Solve some of the following algorithm puzzles with your child. This is a way to practice addition, subtraction, and multiplication methods. You or your child may like to create your own puzzles to challenge each other.

$$\begin{array}{r} \square 9 \square \\ + 8 \square 7 \\ \hline \square 245 \end{array}$$

$$\begin{array}{r} 3 \square 5 \square \\ - 19 \square 8 \\ \hline \square 236 \end{array}$$

$$\begin{array}{r} 3 \square \square 5 \\ \times \quad \square \\ \hline \square \square 950 \end{array}$$

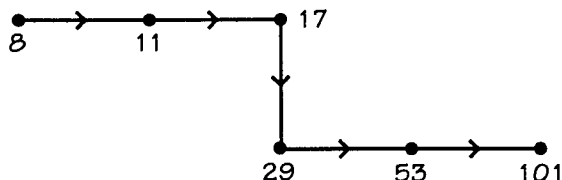
In mathematics class, we sometimes play a game called *Guess My Rule*. There are many variations of the game. Here are some examples:

- Guess the rule for a sequence of numbers
—a rule says what number comes next in the sequence.

3 4 7 11 18 ...

Rule: Add the two preceding numbers to get the next number in the sequence.

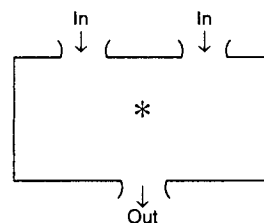
- Guess the rule for an arrow (relation).



Rule: Multiply by 2 and then subtract 5.

- Guess the rule for an operation—this can be described as a machine in which you put two numbers in, the machine operates on them, and then one number comes out.

| | |
|--------------|--------------|
| $4 * 2 = 10$ | $2 * 4 = 12$ |
| $3 * 6 = 24$ | $6 * 3 = 21$ |
| $1 * 3 = 6$ | $3 * 1 = 4$ |



Rule: The operation (machine) multiplies the two numbers and then adds the second number.
or
The machine adds 1 to the first number and then multiplies by the second number.

Note: Sometimes there will be more than one rule that “works” for the information given thus far. Players still try to guess the rule, and we give more clues until they do.

Ask your child to play *Guess My Rule*. Sometimes you be the rule-maker, and sometimes let your child be the rule-maker while you try to guess the rule.

In mathematics class we have been finding what decimal number to add to a given decimal number to get a desired result. For example, the problem might be this:

Luna is taking a 10 mile bike ride.
Her odometer says she has gone 6.8 miles.
How much further does she have to go?

$$6.8 + \boxed{} = 10$$

Try to find opportunities to solve such decimal addition problems with your child. Such a problem could involve money.

I have \$3.57 and I need \$5.00.
How much more money do I need?

IG-IV HOME ACTIVITIES

N17

Try to solve this calculator puzzle with your child.

The only keys you may use are $\boxed{4}$, $\boxed{7}$, $\boxed{+}$, $\boxed{-}$, $\boxed{\times}$, $\boxed{\div}$, and $\boxed{=}$.

You may use the keys in any way you like.

Start with 0 on the display. Try to put 100 (or 150 or 0.5) on the display.

You may also pretend it costs a penny for every key you press. Then, try to solve the puzzle in the cheapest possible way.

N22

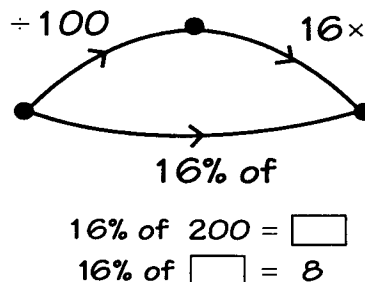
Your child is bringing home a worksheet on adding fractions. Ask that he or she describe Sara and Amelia's method for adding fractions. Then create some other problems where you and your child can use the method to add fractions.

N31

In mathematics class, we have been using patterns and composition of relations to solve percent problems. The following are examples similar to ones from our worksheets. Do some of these problems with your child. Note especially how you can use easier percent calculations to solve more difficult ones.

Complete:

| | |
|--------------|-------|
| 100% of 70 = | _____ |
| 50% of 70 = | _____ |
| 10% of 70 = | _____ |
| 60% of 70 = | _____ |
| 70% of 70 = | _____ |
| 5% of 70 = | _____ |
| 65% of 70 = | _____ |
| 15% of 70 = | _____ |



N36

In mathematics class, we played a game called *Calculator Golf*. The following is a brief description of the game. Try playing it with your child.

Start with a number on the calculator display and set a goal.

Choose two number keys that will be allowed in the game.

For example:

Starting number: 54

Goal: 1 000

Keys: $\boxed{2}$ $\boxed{3}$

$\boxed{+}$ $\boxed{-}$ $\boxed{\times}$ $\boxed{\div}$

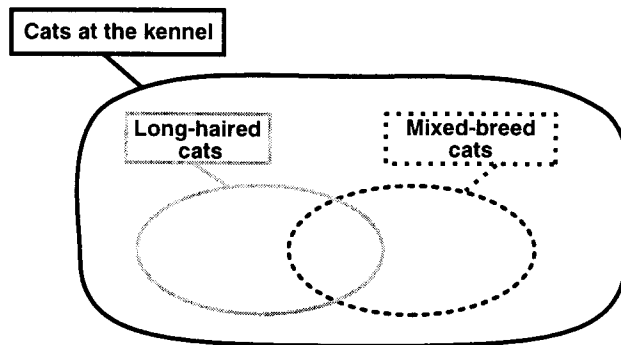
$\boxed{=}$

Players take turns pressing an operation key followed by the number keys in any combination (in this case any combination of $\boxed{2}$ and $\boxed{3}$); then press $\boxed{=}$. Players work together to get the goal 1 000 on the display in as few turns as possible.

The following is a counting problem like ones we have been solving in mathematics class. Try to solve this problem with your child.

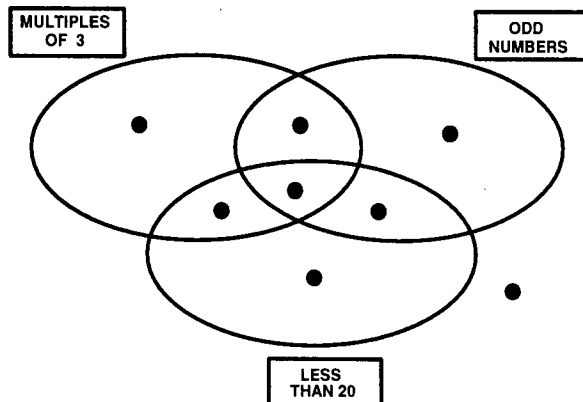
- 1) The kennel has 50 cats.
- 2) 30 cats at the kennel are mixed-breed cats.
- 3) 20 cats at the kennel are long-haired cats.
- 4) 10 cats at the kennel are short-haired, purebred cats.

Use the clues to determine the number of cats in each region inside the black string.



In mathematics class we have been playing *The String Game* with numbers using three strings. The game involves placement of a number in one of eight regions in a string picture. Try this problem with your child.

Label each dot in the string picture with one of the numbers in the box.



| | |
|----|----|
| 1 | 30 |
| 99 | 25 |
| 12 | 7 |
| 16 | 50 |

IG-IV HOME ACTIVITIES

G7

In mathematics class, we have found some regular shapes or patterns of several shapes that make tiling designs; i.e., designs in which the pieces fit together the way tiles cover a floor. We say that the single shape or a pattern of several shapes *tessellates*. A tessellation has no gaps or holes between pieces and no overlapping pieces.

With your child, look for tessellation patterns at home or in other buildings. You may notice tessellations being used for floor or wall patterns, or on rugs, quilts, clothing, furniture, wire netting, and so on. Help your child make a sketch of a tessellation pattern you find to share with the class.

G10

Your child is bringing home an Escher-type print that he or she created in mathematics class. Ask how it was made, and perhaps work with your child to create other such prints.

N7(a)

Multiplication Game Sheet

$$\begin{array}{r} \square \square \\ \times \square \square \\ \hline \end{array}$$

$$\begin{array}{r} \square \square \square \\ \times \square \square \\ \hline \end{array}$$

N7(b)

Subtraction Game Sheet

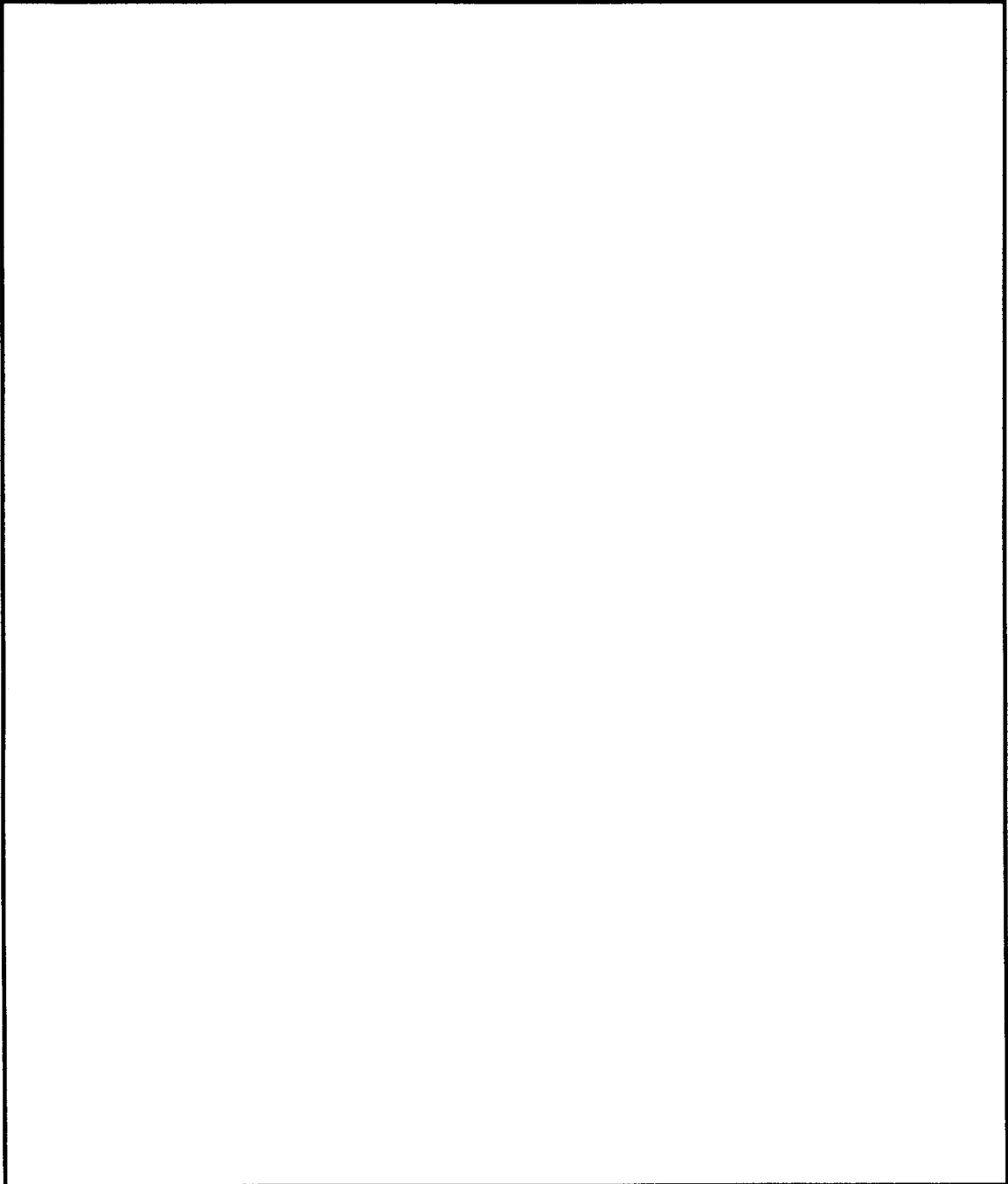
$$\begin{array}{r} \square \quad \square \quad \square \\ - \quad \quad \square \quad \square \\ \hline \end{array}$$

$$\begin{array}{r} \square \quad \square \quad \square \\ - \quad \square \quad \square \quad \square \\ \hline \end{array}$$

N10

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N20



Dear Parent/Guardian:

We are working on a paper/pencil method (algorithm) for division in our mathematics class. This may be a little later than you might have expected. However, as you should be aware from earlier letters, this is not the beginning of our work on the division concept, nor on solving division problems. In fact, our current work on a paper/pencil algorithm really summarizes many of our earlier experiences with division.

The algorithm suggests that we use a sequence of routine steps, and our earlier experiences help us understand reasons for the steps. For example:

Note: You may expect this procedure to be more abbreviated. However, it is not necessary and your child may either choose to make or not to make abbreviations.

$$\begin{array}{r|l}
 322 \text{ R} = 29 & \\
 43 \overline{) 13875} & \\
 \underline{-12900} & 300 \\
 975 & \\
 \underline{-860} & 20 \\
 115 & \\
 \underline{-86} & 2 \\
 29 &
 \end{array}$$

In doing division calculations at home, remember that a paper/pencil method is only one method. Sometimes it might be better to use mental methods, number patterns, or even a calculator. We hope that a variety of methods will help children develop the ability to check their work and recognize reasonable answers. Also, remember that calculation should be a tool for solving interesting problems rather than simply a chore done for its own sake.

Sincerely,

N22(b)

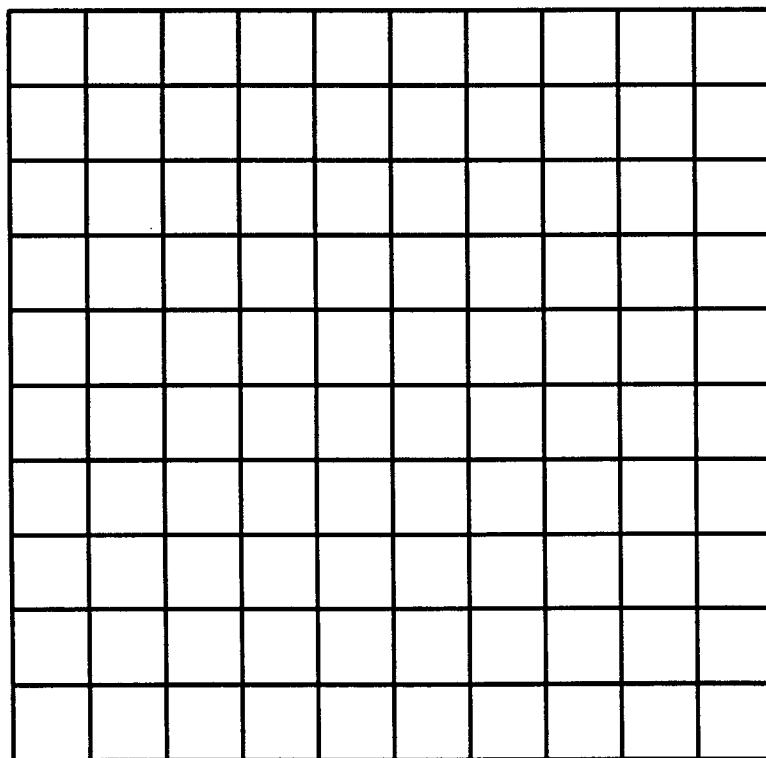
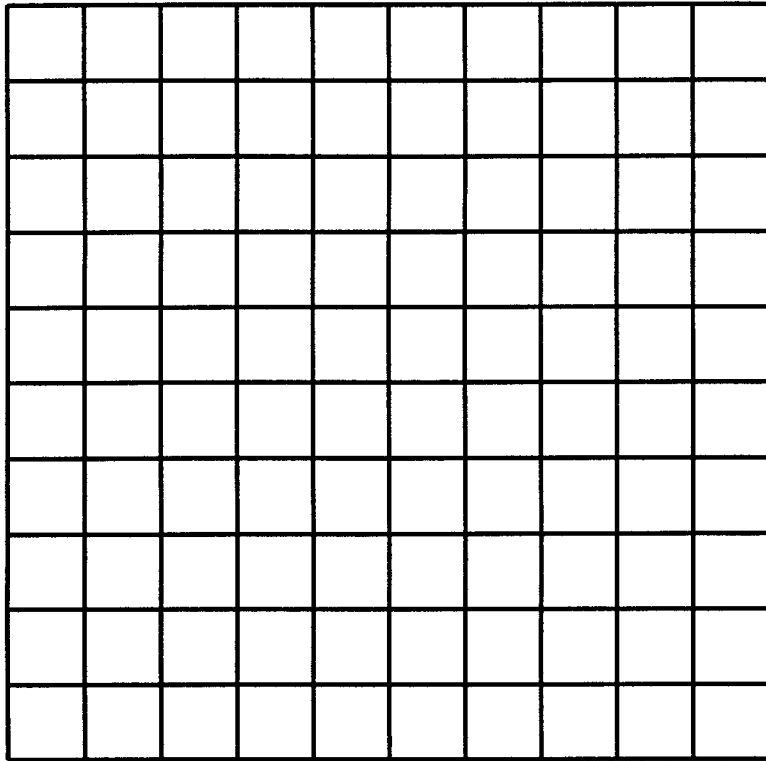
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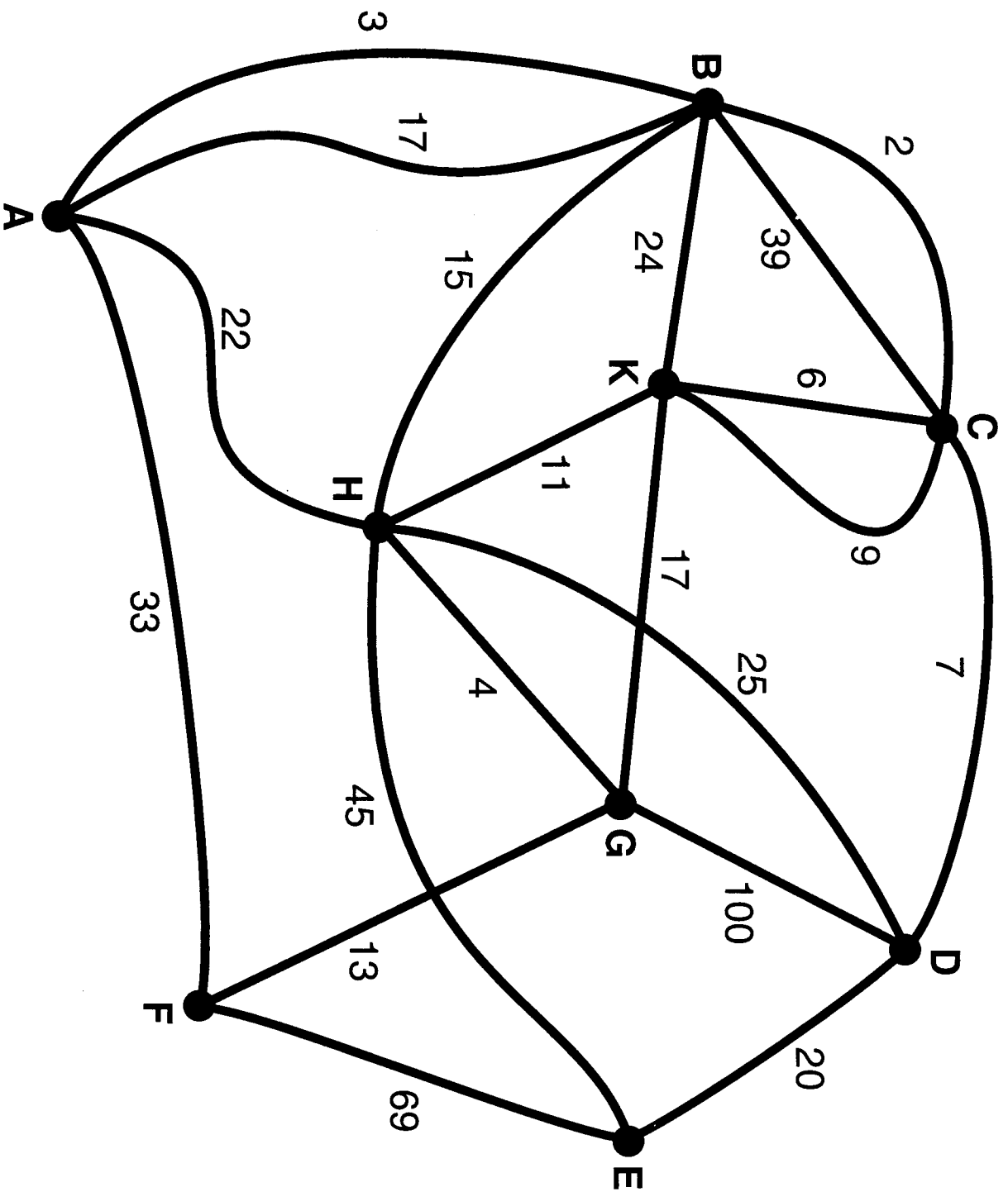
Sara

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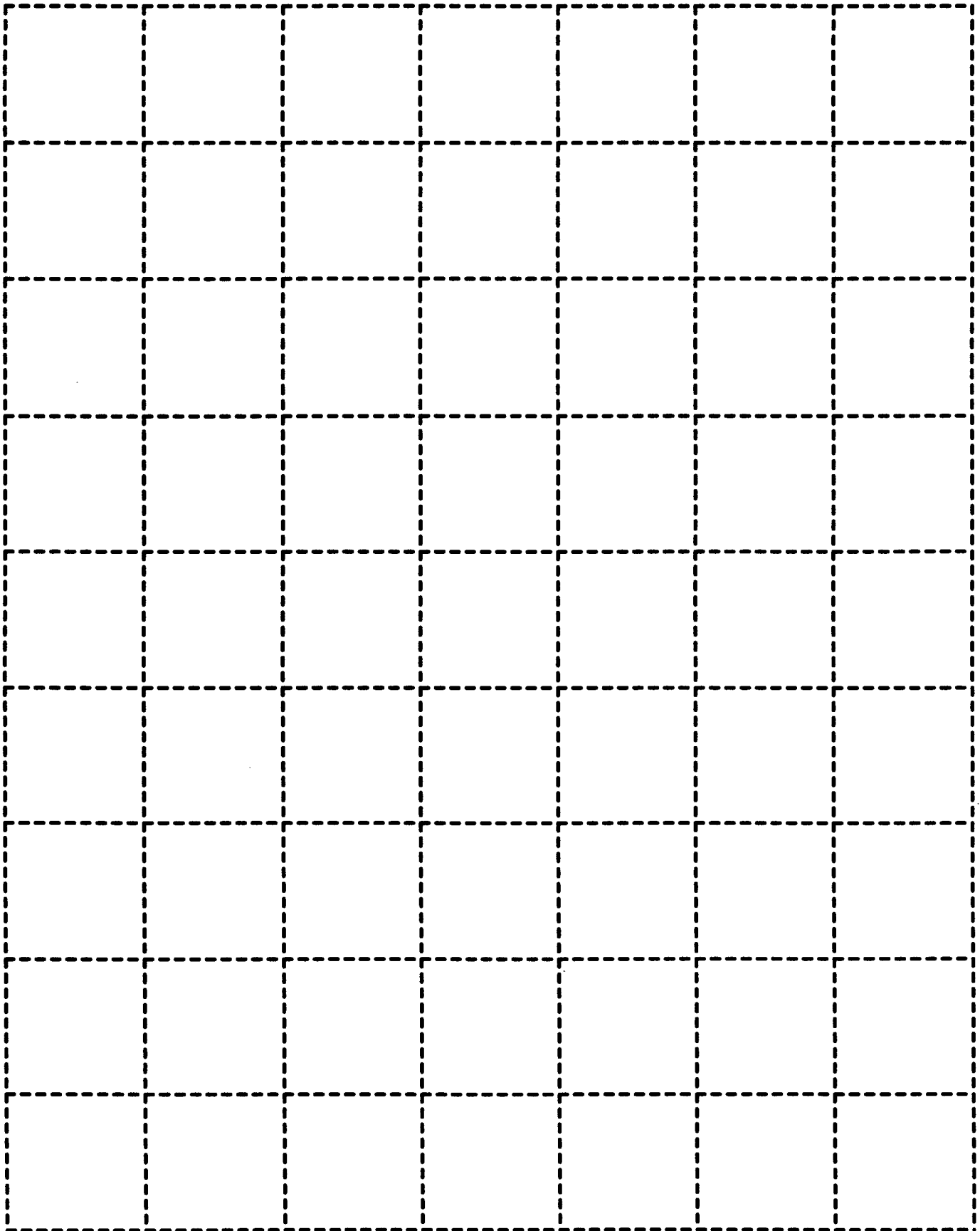
Amelia

N29





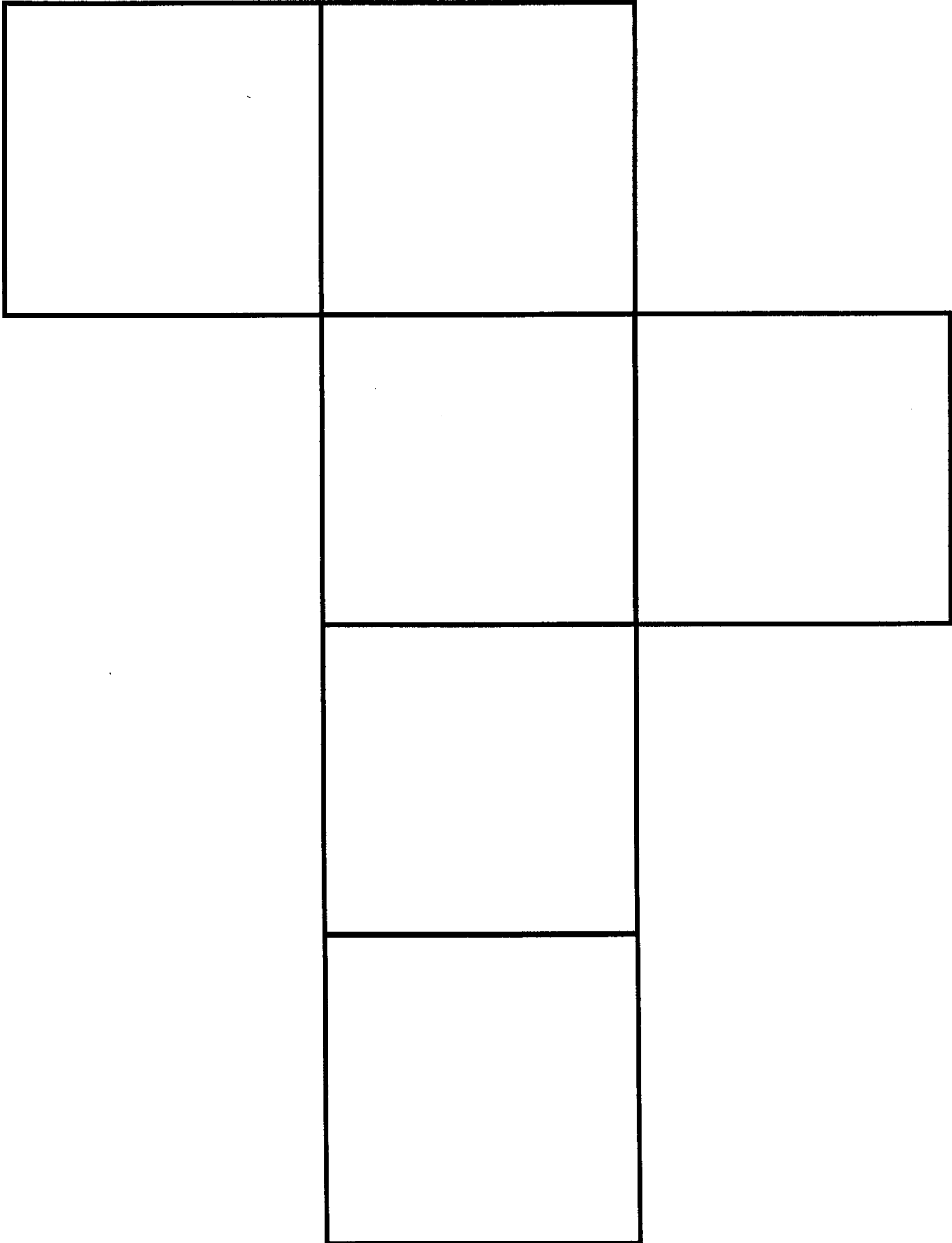
G5(a)



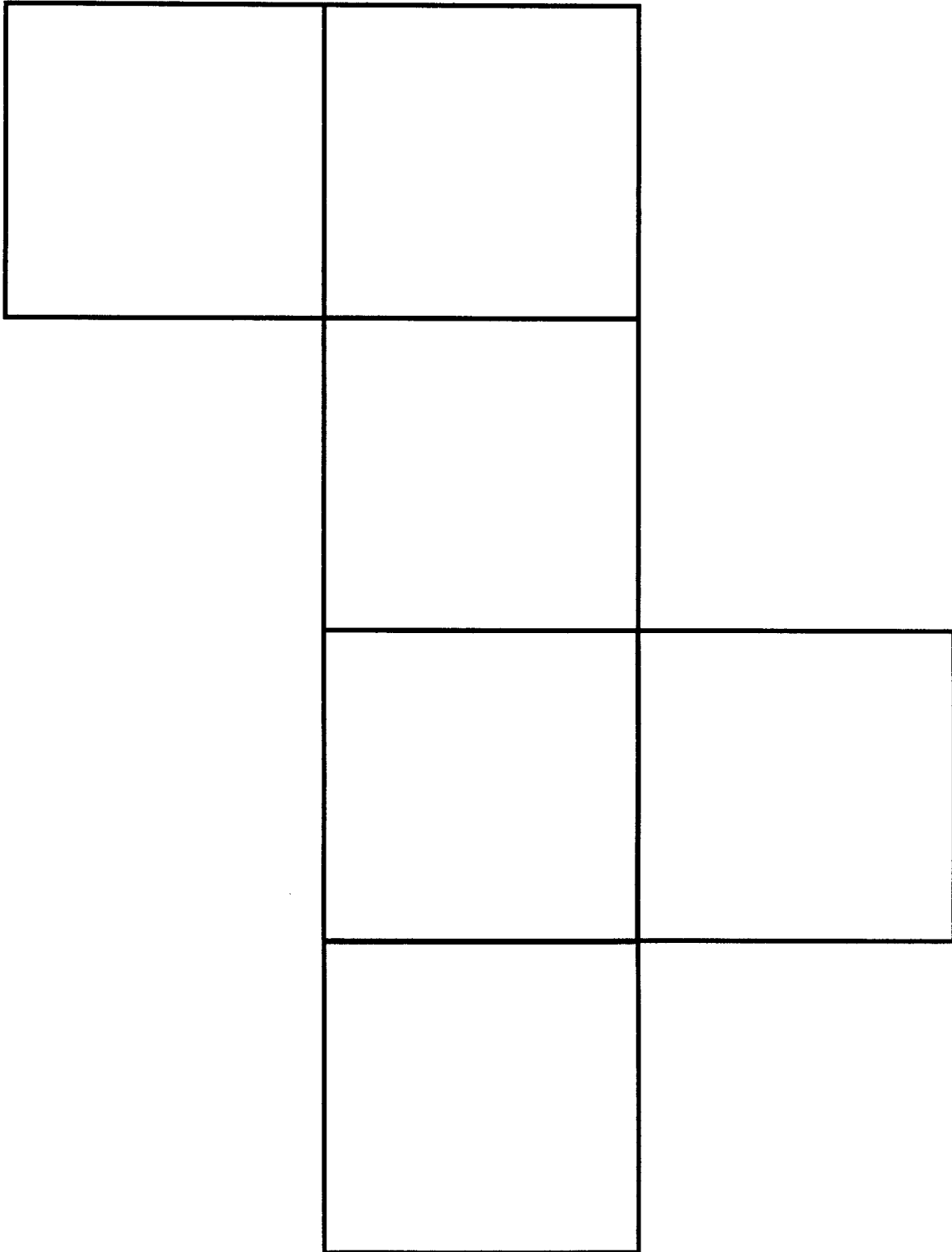
G5(b)

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G5(c)



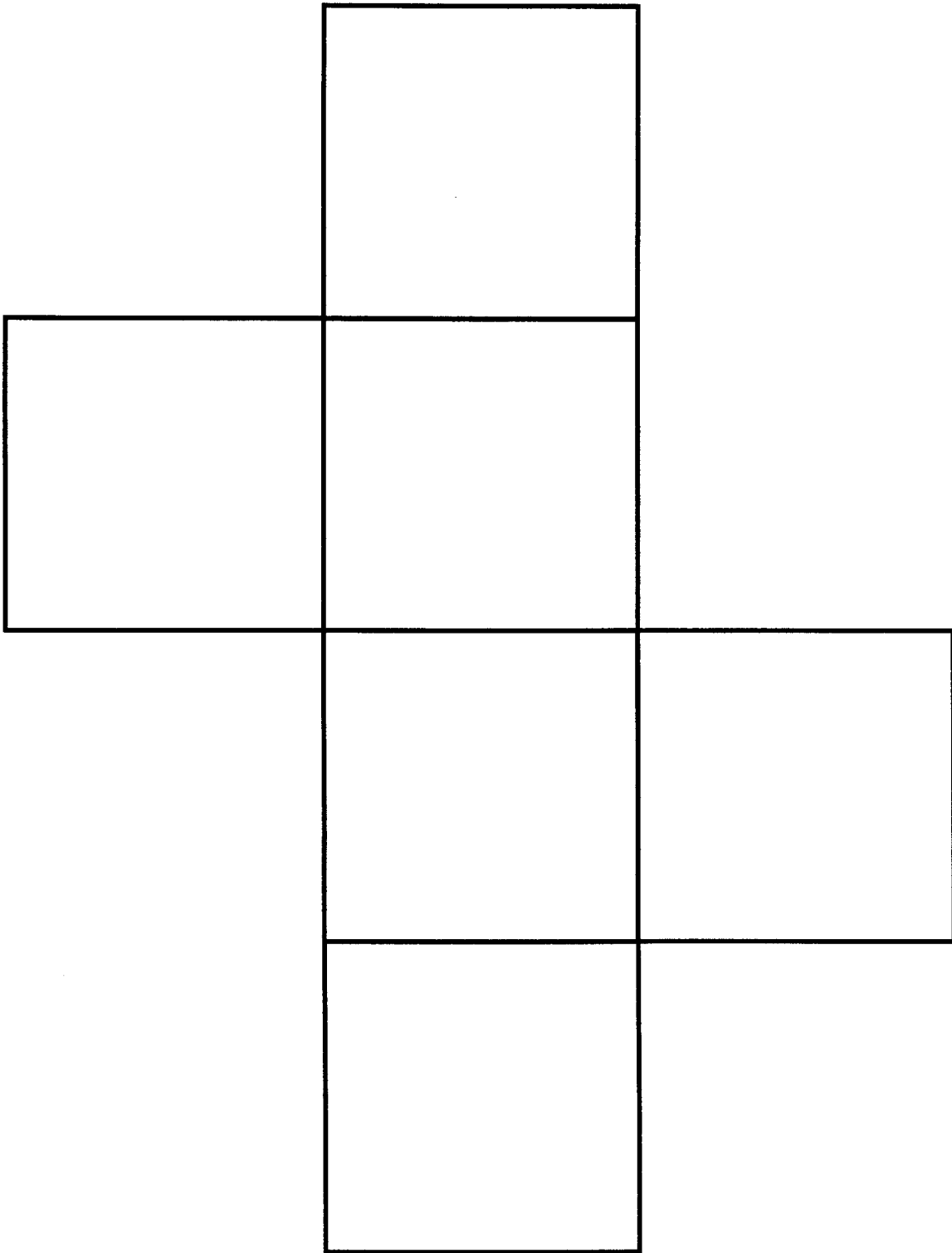
G5(d)



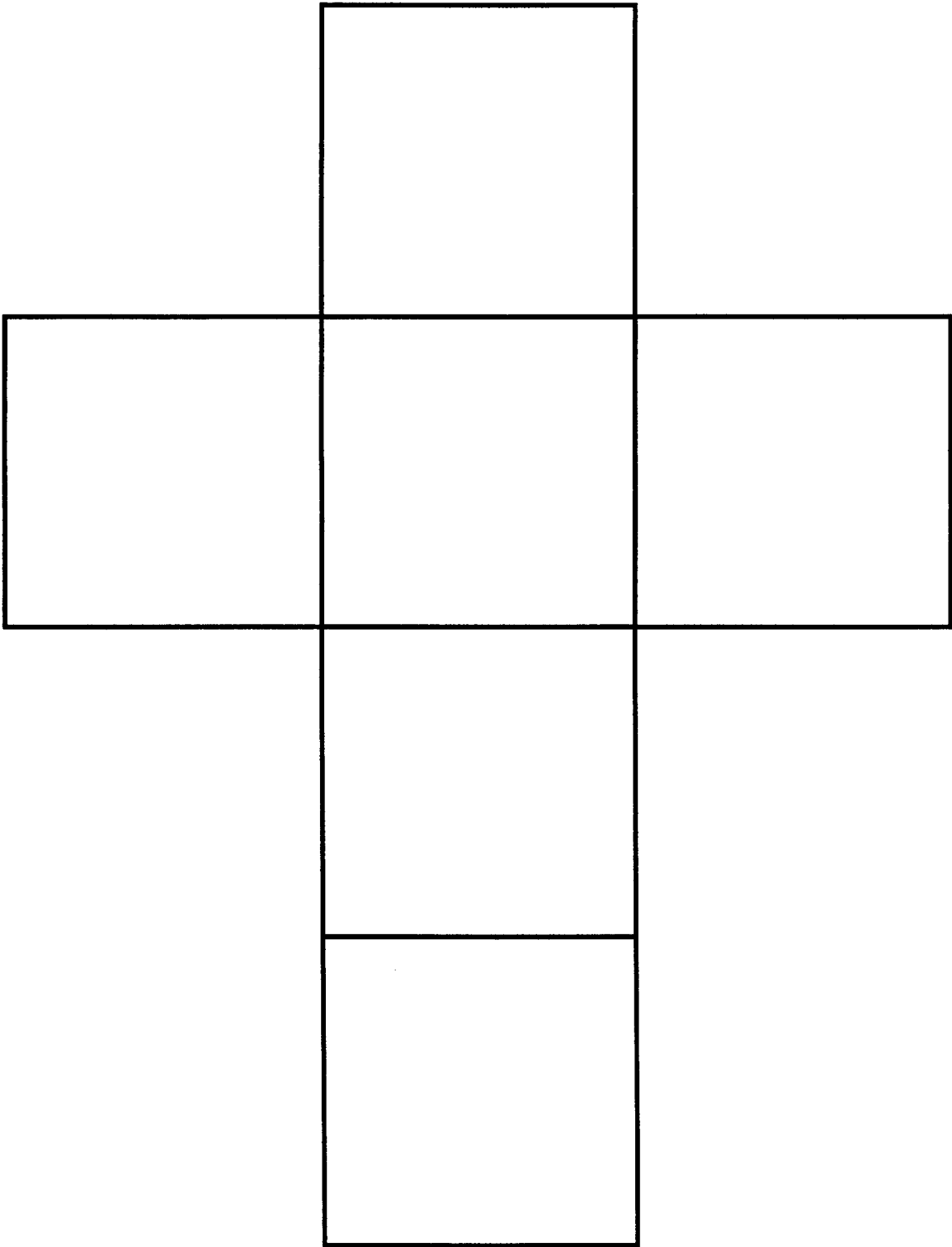
G5(e)

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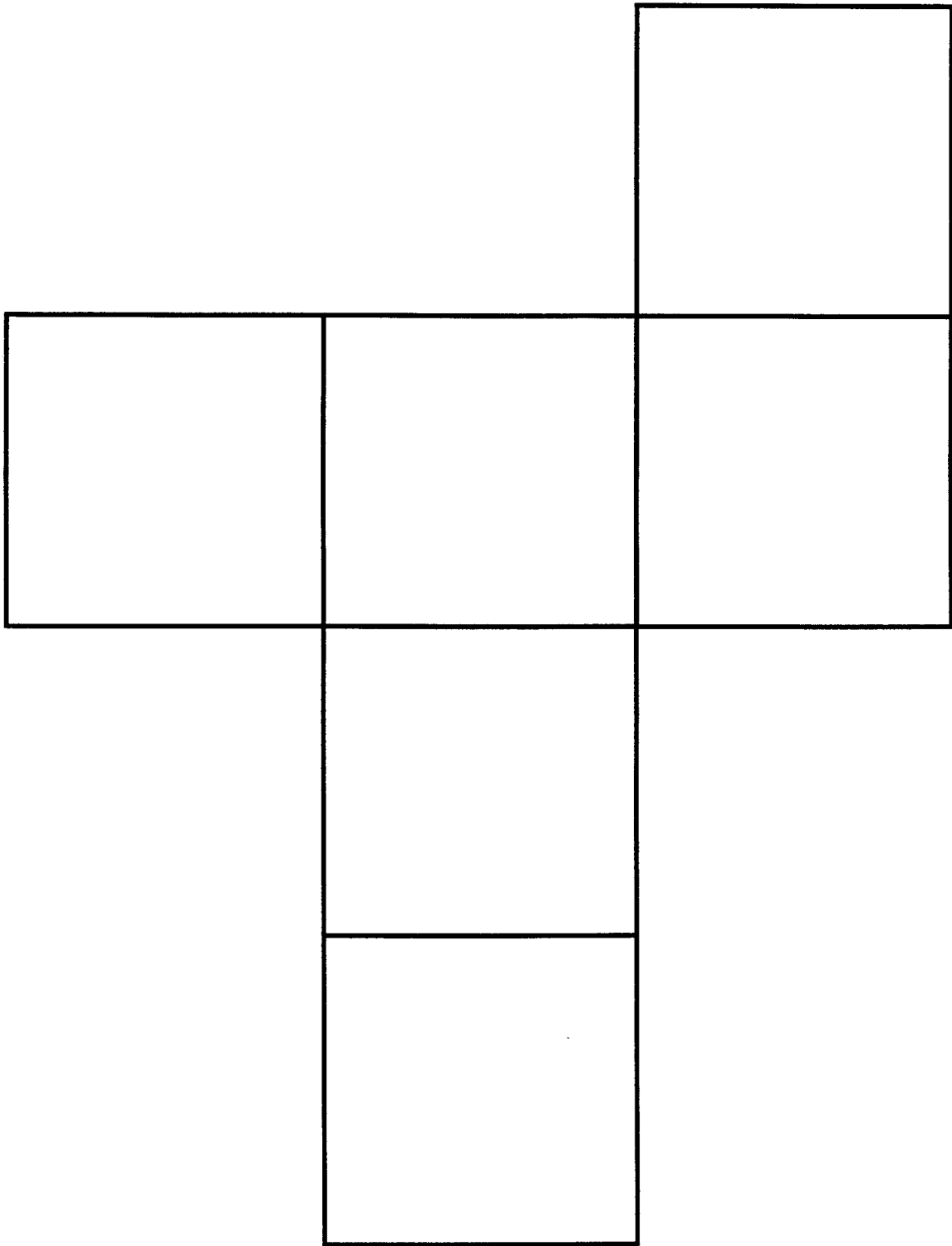
G5(f)



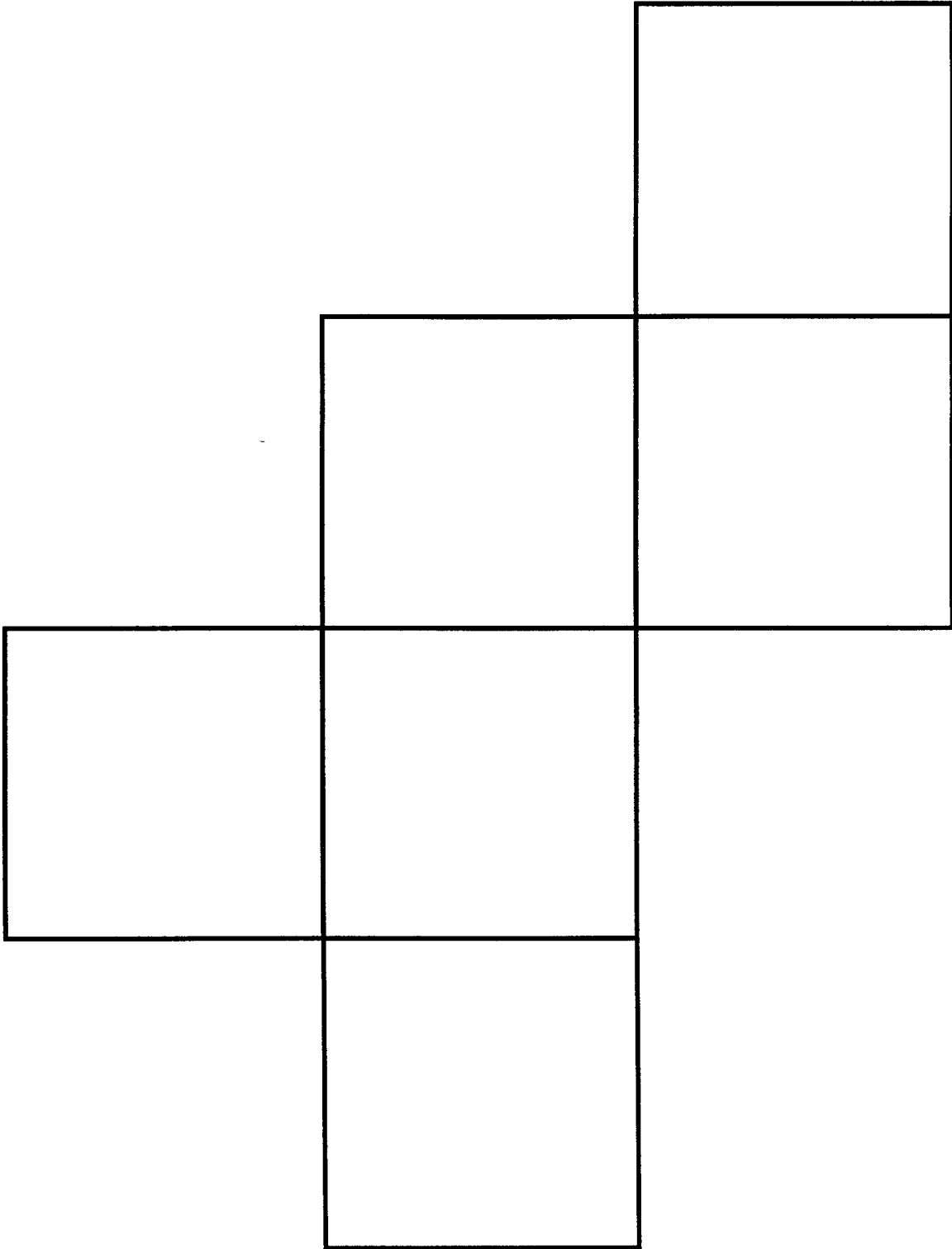
G5(g)



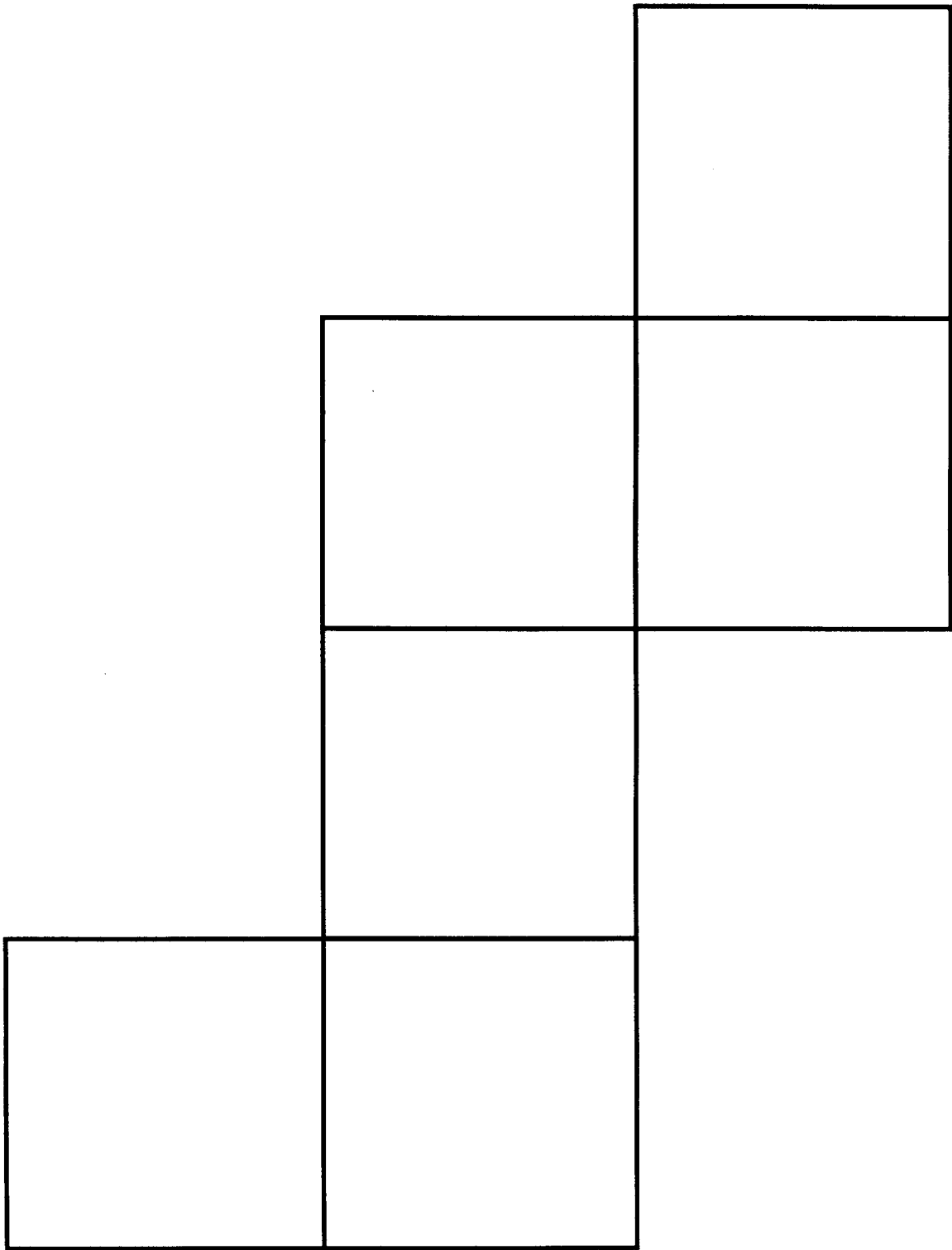
G5(h)



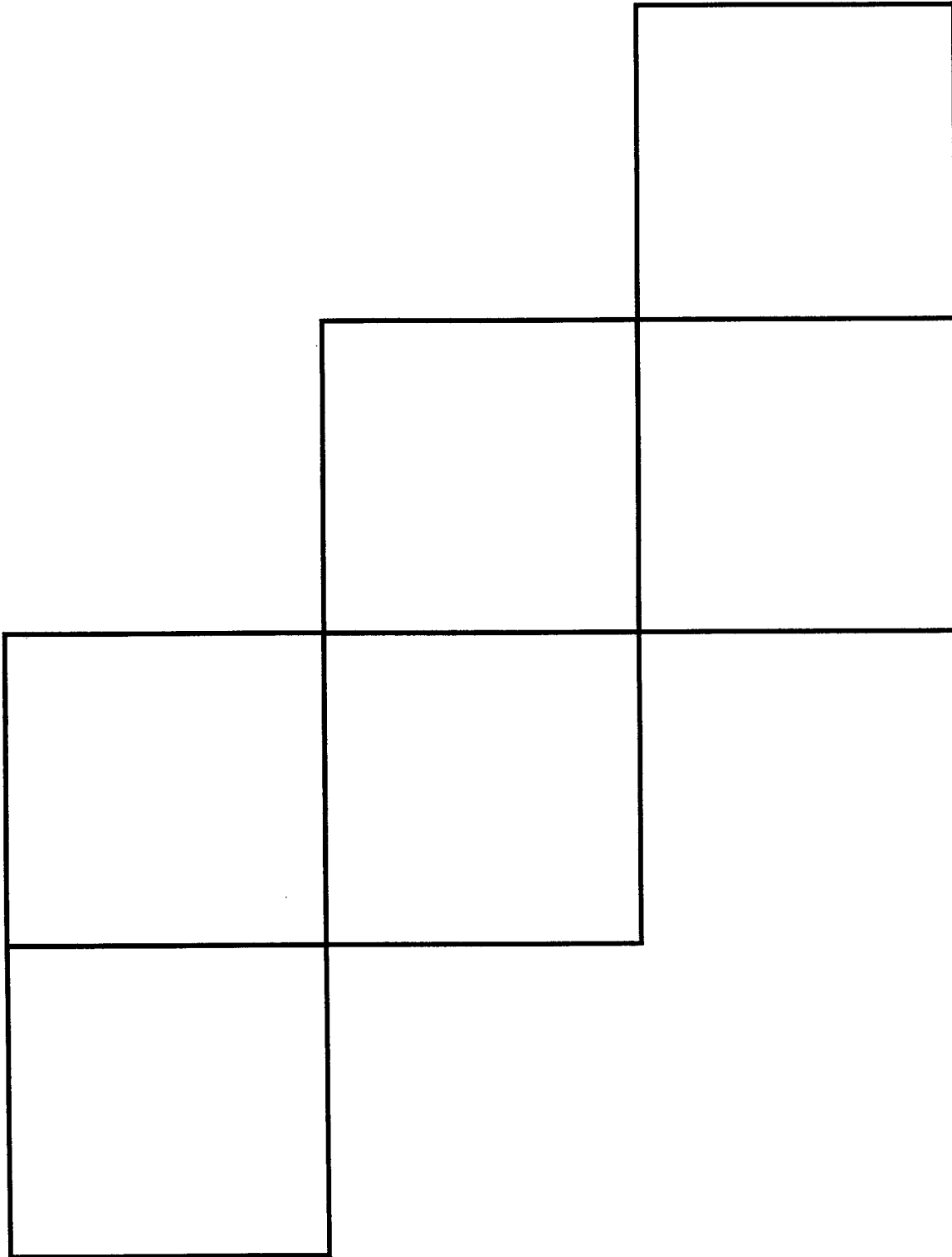
G5(i)



G5(j)



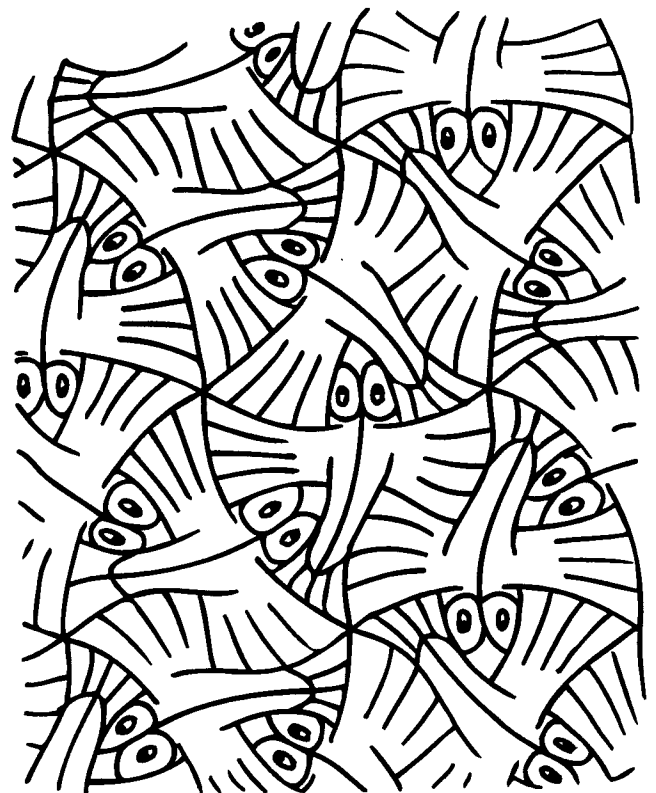
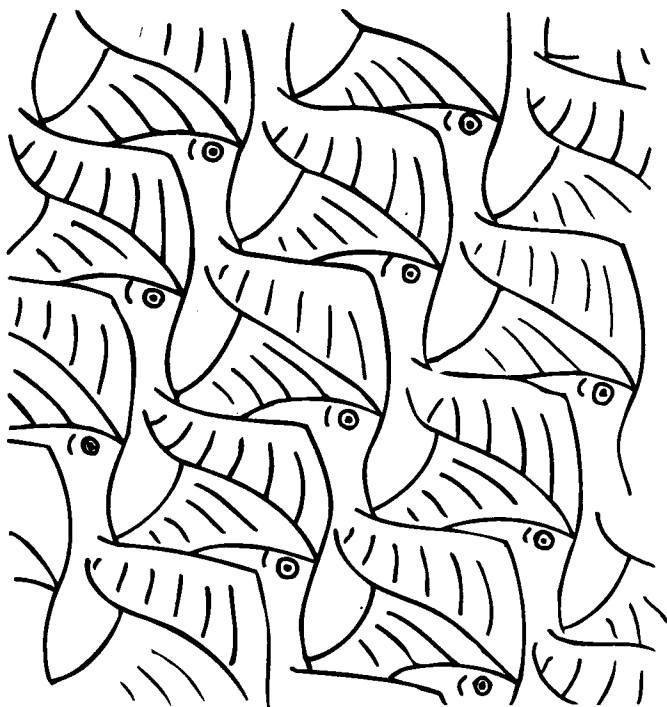
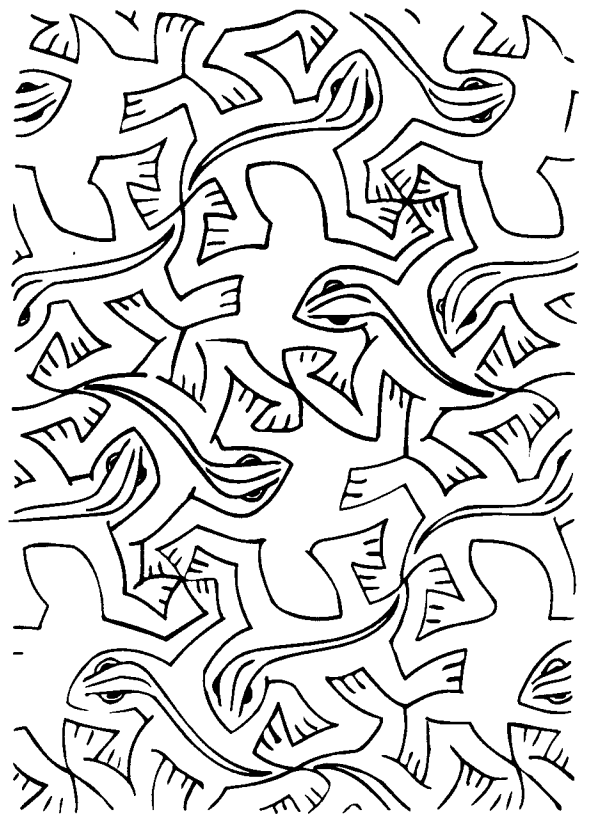
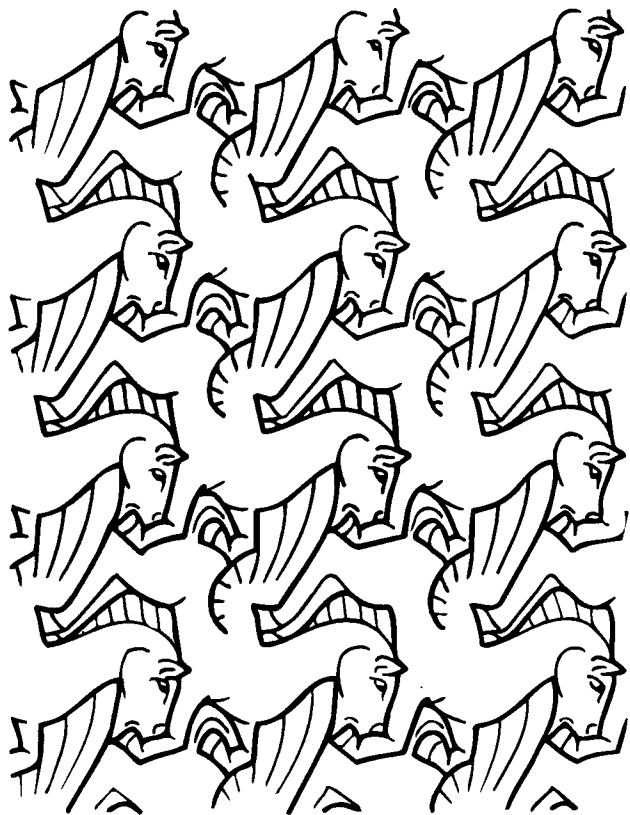
G5(k)



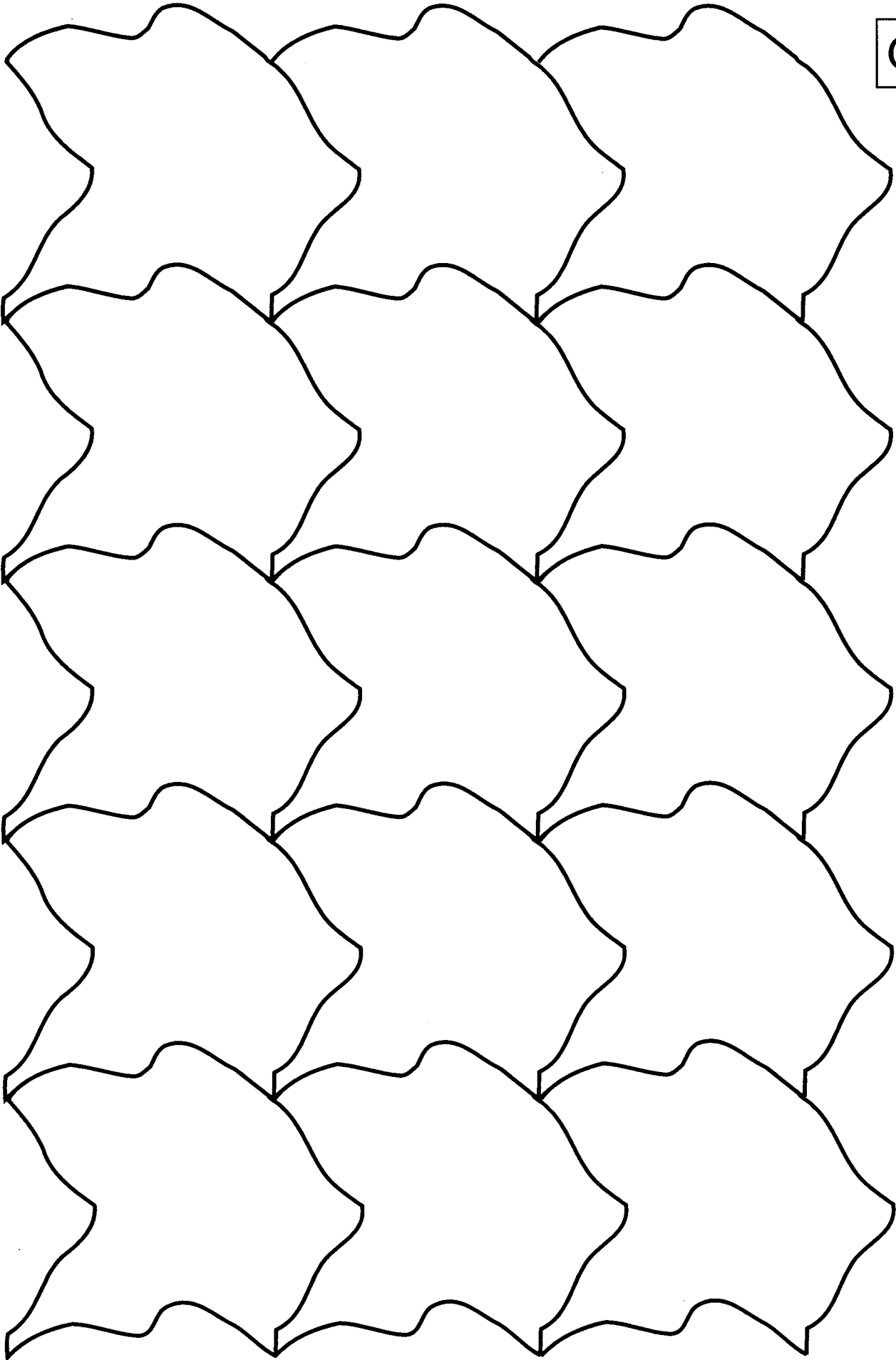
G5(I)

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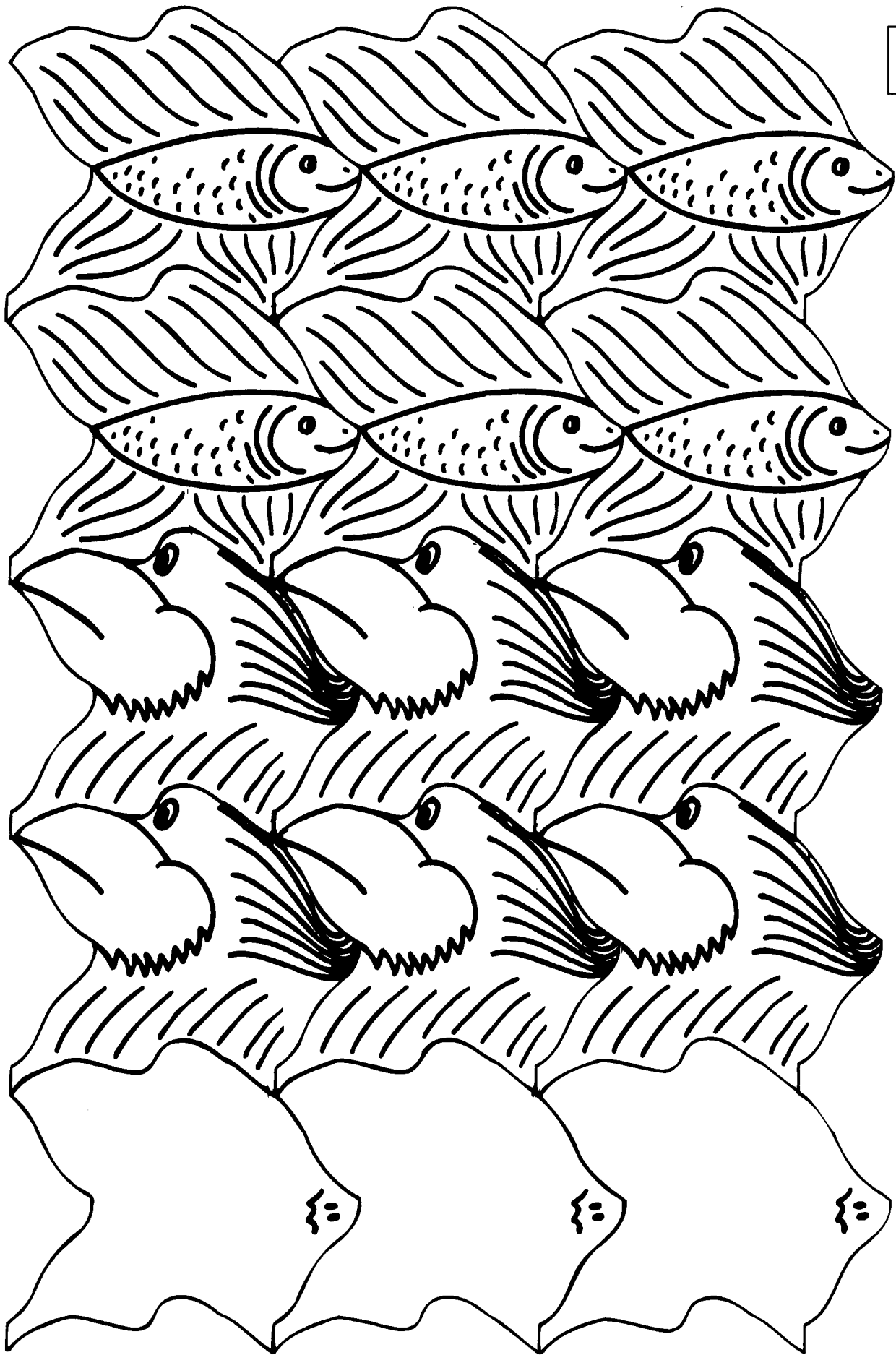
G9(a)



G9(b)



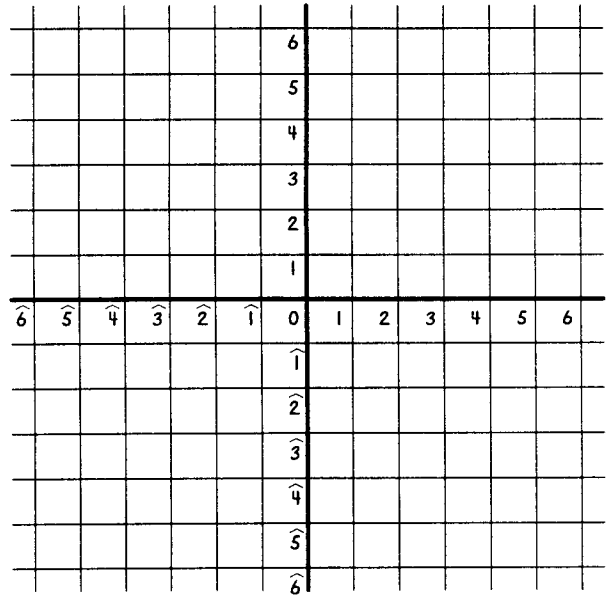
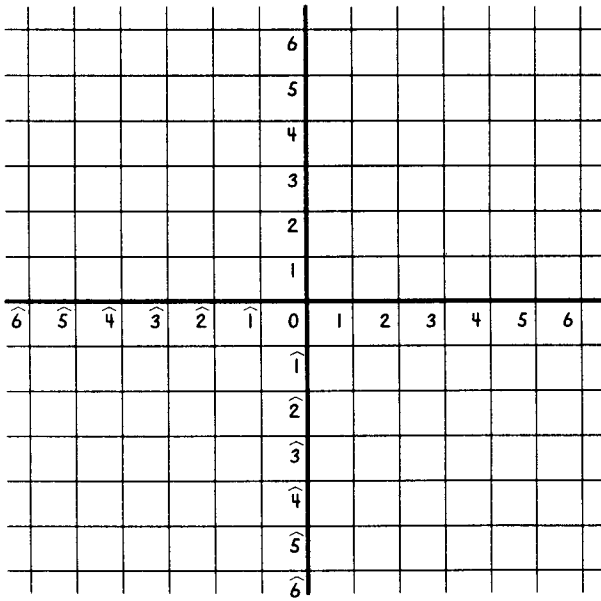
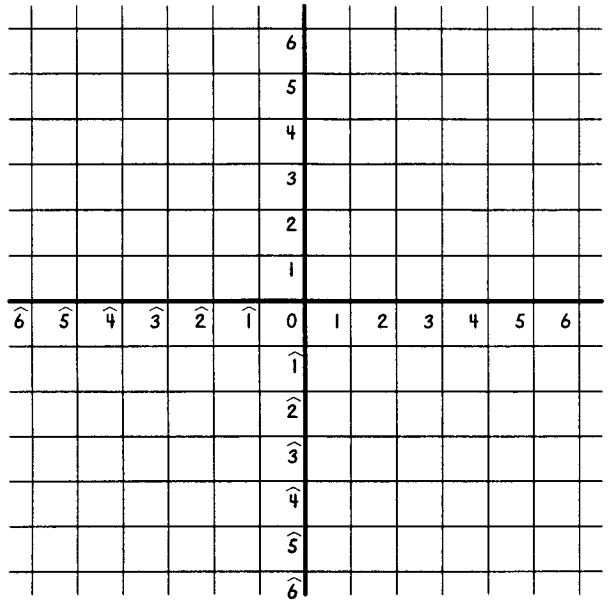
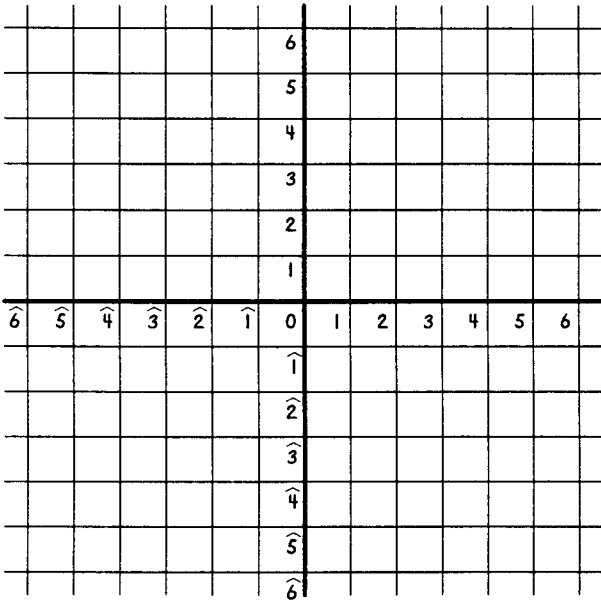
G9(c)



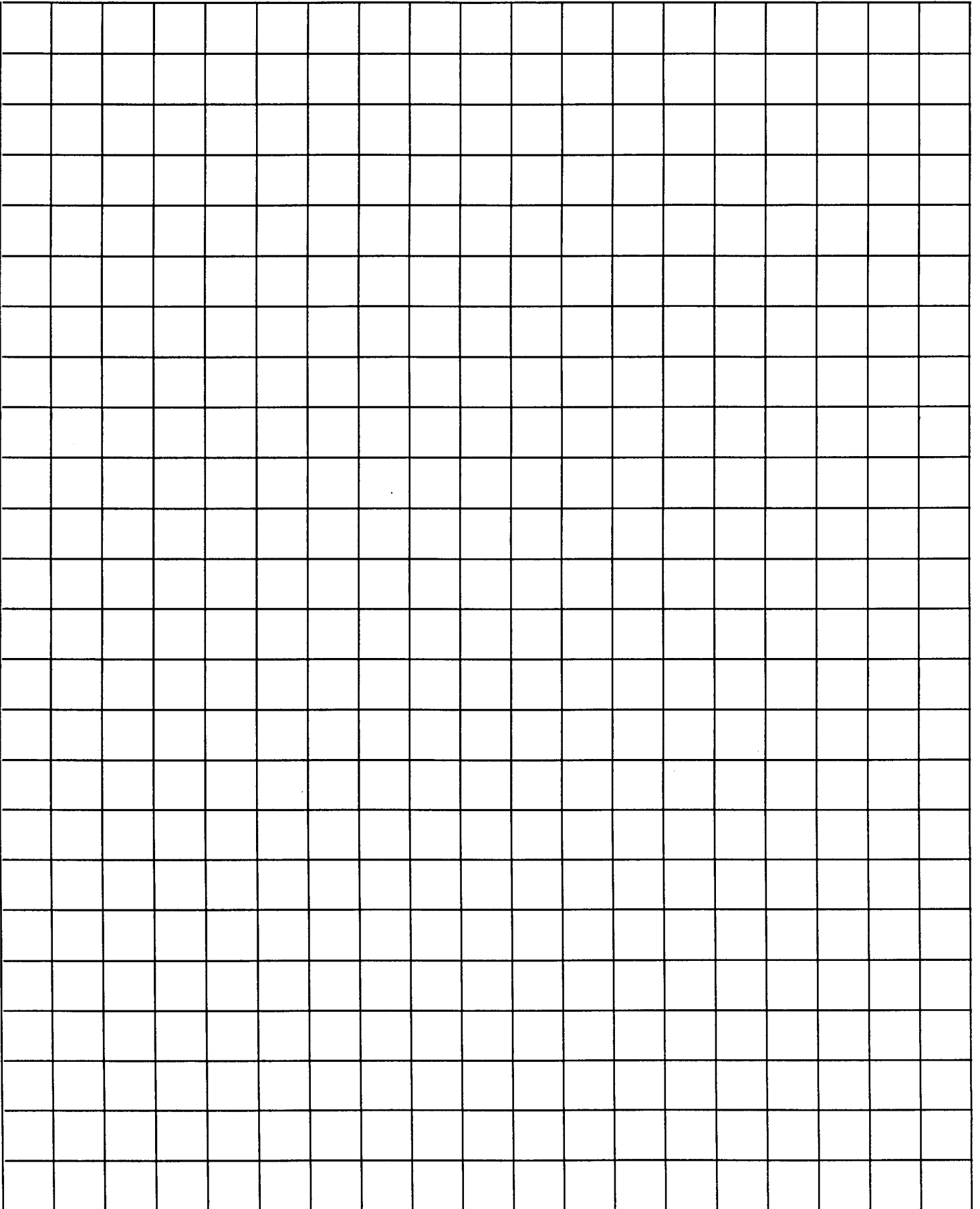
G11(a)

| | | | | | | | | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|---|---|---|---|---|
| | | | | | | 6 | | | | | | |
| | | | | | | 5 | | | | | | |
| | | | | | | 4 | | | | | | |
| | | | | | | 3 | | | | | | |
| | | | | | | 2 | | | | | | |
| | | | | | | 1 | | | | | | |
| $\widehat{6}$ | $\widehat{5}$ | $\widehat{4}$ | $\widehat{3}$ | $\widehat{2}$ | $\widehat{1}$ | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | | $\widehat{1}$ | | | | | | |
| | | | | | | $\widehat{2}$ | | | | | | |
| | | | | | | $\widehat{3}$ | | | | | | |
| | | | | | | $\widehat{4}$ | | | | | | |
| | | | | | | $\widehat{5}$ | | | | | | |
| | | | | | | $\widehat{6}$ | | | | | | |

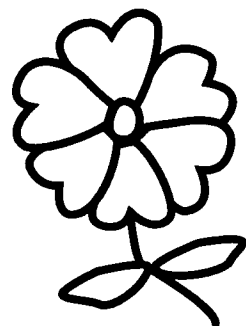
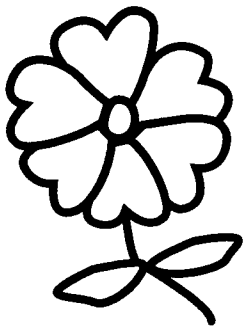
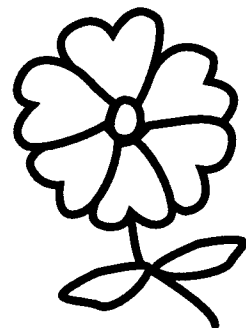
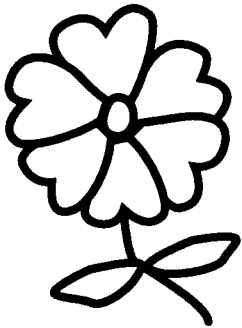
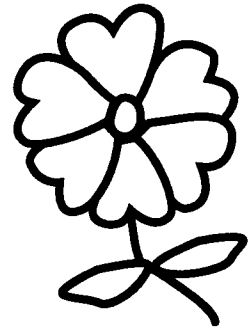
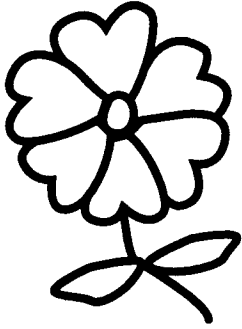
G11(b)

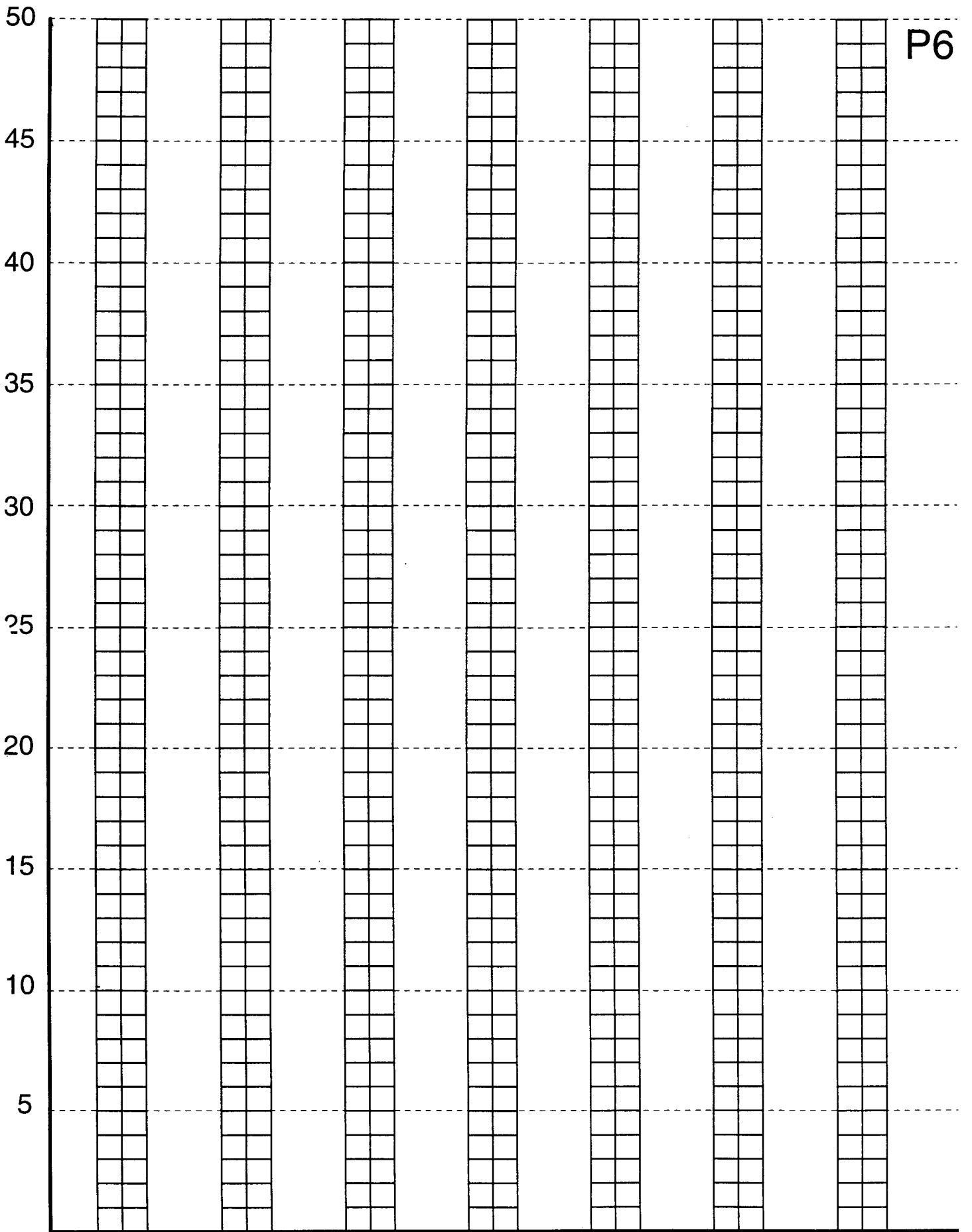


G12



P1





W2(a)

Selection of Problems #1
(15-6856R)

Student Name _____
Date _____

Responses

| | | | | |
|------------------------------|---|--|-------|-------|
| Arrows | p.2 | (various + and x) | 18 | _____ |
| | p.6 | (6x, +2, +12, composition) | 14 | _____ |
| | p.11 | (+6, -9, +18, composition) | 6 | _____ |
| | p.14 | (÷10 composition) | 12 | _____ |
| | p.16 | (+ ³ / ₄ , +2) | 10 | _____ |
| | p.24 | (fraction composition) | 11 | _____ |
| | p.26 | (+ square number arrow roads) | 23 | _____ |
| | p.31 | (fraction x) | 12 | _____ |
| Minicomputers | p.19 | (dynamics) | 10 | _____ |
| | p.25 | (patterns) | 7 | _____ |
| Strings | p.4 | (pos. divisors, odd, prime, less than) | 6 | _____ |
| | p.21 | (<i>String Game</i> with numbers) | 14 | _____ |
| | p.27 | (counting problems) | 8 | _____ |
| Calculations with +, -, x, ÷ | p.12 | (story problems for division) | 4 | _____ |
| | p.17 | (add., subt., mult., div. puzzles) | 12 | _____ |
| Fractions | p.8 | (fractional parts of shapes) | 10 | _____ |
| | p.22 | (fractional parts of shapes) | 7 | _____ |
| Geometry and Measurement | p.10 | (length, estimation, and comparisons) | 5 | _____ |
| | p.15 | (volume) | 2 | _____ |
| Detective Stories | p.3 | (Minicomputer, string picture) | 5 | _____ |
| | p.7 | (arrow pict., calc. relations, string pict.) | 13 | _____ |
| | p.13 | (arrow picture, string picture) | 8 | _____ |
| | p.18 | (decimal number line, arrow picture) | 18 | _____ |
| | p.20 | (string picture, MC, arrow picture) | 12 | _____ |
| | p.23 | (MC, calc. relations, strings, arrow pict.) | 24 | _____ |
| | p.30 | (arrow composition, calc. relations) | 9 | _____ |
| p.32 | (strings, calc. relations, arrow pict.) | 2 | _____ | |
| Number Sense/Combinations | p.5 | (nos. in paragraphs, probabilities) | 7 | _____ |
| | p.9 | (decimal number line) | 8 | _____ |
| | p.28 | (counting four digit numbers) | 27 | _____ |
| | p.29 | (counting patterns) | 17 | _____ |

W2(b)

Dear Parent/Guardian:

With this letter, we are sending home your child's *Selection 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,

Selection of Problems #2
(15-6864R)

Student Name _____
Date _____

| | | Responses |
|------------------------------|--|-----------|
| Arrows | p.7 (<i>Guess My Rule</i>) | 12 _____ |
| | p.11 (x2, +6, composition) | 8 _____ |
| | p.12 (composition, fraction x) | 12 _____ |
| | p.18 (calculator relations) | 12 _____ |
| | p.26 (composition, fraction x) | 11 _____ |
| | p.28 (wipe out with fractions) | 7 _____ |
| Minicomputer/Abaci | p.8 (adding checkers) | 7 _____ |
| | p.27 (weighted checkers) | 8 _____ |
| Strings | p.9 (pos. divisors, squares, odd numbers) | 8 _____ |
| | p.17 (<i>String Game</i> with numbers) | 14 _____ |
| | p.23 (counting problems) | 7 _____ |
| | p.30 (<i>String Game</i> with numbers) | 12 _____ |
| Calculations with +, -, x, ÷ | p.3 (add. and sub. puzzles) | 17 _____ |
| | p.6 (multiplication patterns) | 7 _____ |
| | p.14 (multiplication with decimals) | 6 _____ |
| | p.22 (product of 56) | 6 _____ |
| | p.32 (names for nos. with given symbols) | 14 _____ |
| Fractions | p.15 (fractional parts of shapes) | 6 _____ |
| Geometry and Measurement | p.4 (length) | 6 _____ |
| | p.10 (symmetry) | 17 _____ |
| | p.13 (volume) | 4+ _____ |
| | p.21 (length of zigzags) | 8 _____ |
| Detective Stories | p.2 (Minicomputer, string picture) | 7 _____ |
| | p.5 (arrow picture, strings) | 7 _____ |
| | p.19 (arrow roads, Minicomputer) | 12 _____ |
| | p.24 (strings, calc. relations, arrow pict.) | 8 _____ |
| | p.29 (calc. relations, MC, arrow pict.) | 12 _____ |
| | p.31 (strings, MC, arrow picture) | 1 _____ |
| Number Sense/Combinations | p.16 (map distance) | 3 _____ |
| | p.20 (probability, fair games) | 4 _____ |
| | p.25 (number line with decimals) | 15 _____ |

Selection of Problems #3
(15-6872R)

Student Name _____
Date _____

Responses

| Arrows | p.4 (pair tags) | 6 _____ |
|------------------------------|---|----------|
| | p.6 (+4, +6, composition) | 8 _____ |
| | p.11 (arrow road for division) | 13 _____ |
| | p.12 (+ $\frac{2}{3}$) | 17 _____ |
| | p.14 (is less than) | 13 _____ |
| | p.17 (arrow road with decimals) | 6 _____ |
| | p.21 (addition of decimals) | 12 _____ |
| | p.24 (composition) | 7 _____ |
| | p.27 (-0.3, +10) | 9 _____ |
| Strings | p.2 (less than, pos. divisors, multiples) | 9 _____ |
| | p.8 (less than, prime, multiples) | 7 _____ |
| | p.16 (<i>String Game</i> with numbers) | 16 _____ |
| | p.30 (<i>String Game</i> with numbers) | 14 _____ |
| Calculations with +, -, x, ÷ | p.7 (addition, subtraction puzzles) | 16 _____ |
| | p.9 (decimal estimation) | 6 _____ |
| | p.15 (multiplication, division puzzles) | 16 _____ |
| | p.18 (story problems) | 2 _____ |
| | p.20 (multiplication patterns) | 14 _____ |
| Fractions | p.3 (fractional parts of shapes) | 6 _____ |
| Geometry and Measurement | p.13 (length of zigzags) | 7 _____ |
| | p.23 (symmetry, reflections) | 18 _____ |
| | p.26 (volume of cubes) | 4 _____ |
| Detective Stories | p.5 (Minicomputer, string picture) | 5 _____ |
| | p.10 (string picture, calc. relations) | 8 _____ |
| | p.19 (arrow picture, Minicomputer) | 7 _____ |
| | p.22 (Minicomputer, calc. relations) | 7 _____ |
| | p.25 (number line, arrow picture) | 17 _____ |
| | p.28 (Minicomputer, number line) | 13 _____ |
| Probability/Combinations | p.29 (map distance) | 8 _____ |
| | p.32 (area model for probability) | 3 _____ |

Selection of Problems #4
(15-6880R)

Student Name _____
Date _____

Responses

| | | | |
|--------|--|----|-------|
| Arrows | p.3 (label arrows in two ways) | 16 | _____ |
| | p.5 (composition) | 9 | _____ |
| | p.6 (pair tags) | 6 | _____ |
| | p.8 (is less than) | 11 | _____ |
| | p.10 (mult. and subtraction composition) | 10 | _____ |
| | p.12 (division and fraction times) | 12 | _____ |
| | p.15 ($-\frac{1}{3}$, -2) | 12 | _____ |
| | p.22 (various relations) | 15 | _____ |
| | p.23 (calculator relations) | 4 | _____ |

| | | | |
|--------------------|---------------------------------------|---|-------|
| Minicomputer/Abaci | p.28 (weighted and negative checkers) | 8 | _____ |
|--------------------|---------------------------------------|---|-------|

| | | | |
|---------|---|----|-------|
| Strings | p.2 (pos. divisors, less than, multiples) | 8 | _____ |
| | p.17 (<i>String Game</i> with numbers) | 14 | _____ |
| | p.20 (less than and greater than) | 7 | _____ |
| | p.27 (counting problems) | 6 | _____ |
| | p.31 (<i>String Game</i> with numbers) | 12 | _____ |

| | | | |
|------------------------------|---------------------------|----|-------|
| Calculations with +, -, x, ÷ | p.16 (decimal estimation) | 6 | _____ |
| | p.30 (algorithm puzzles) | 27 | _____ |

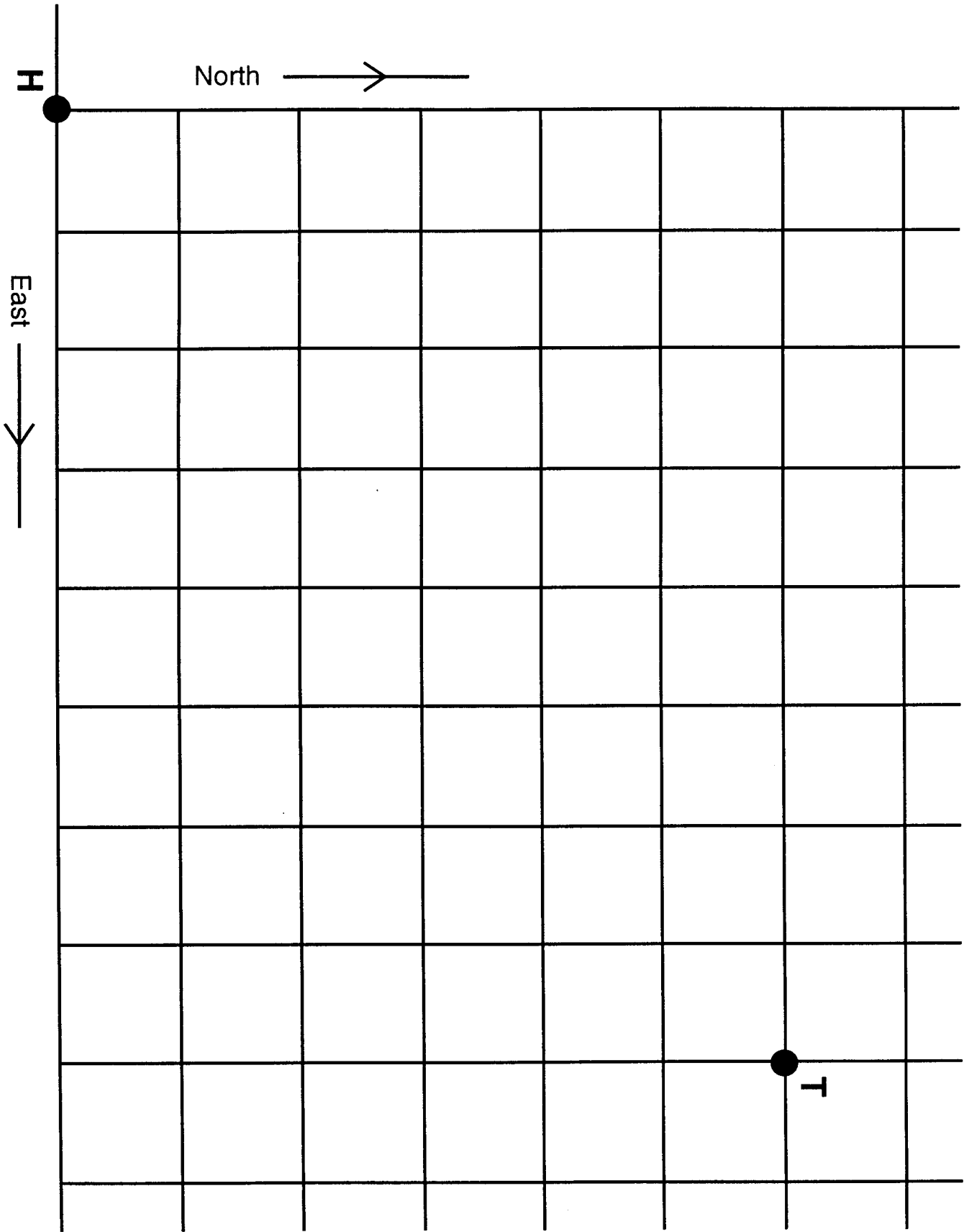
| | | | |
|-----------|----------------------------------|---|-------|
| Fractions | p.7 (fractional parts of shapes) | 6 | _____ |
| | p.14 (fractional story problem) | 5 | _____ |
| | p.16 (adding fractions) | 5 | _____ |

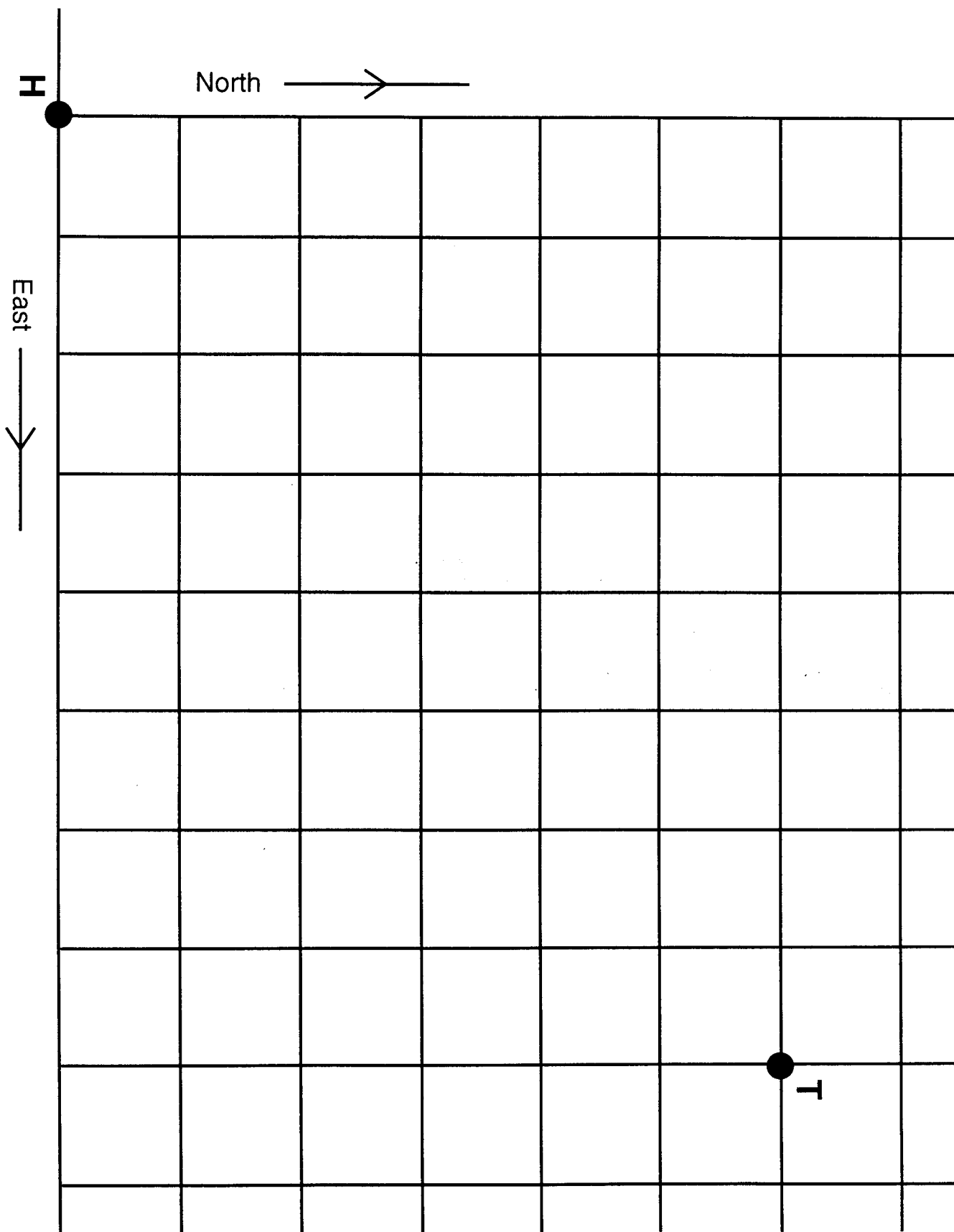
| | | | |
|--------------------------|----------------------------|----|-------|
| Geometry and Measurement | p.9 (symmetry) | 11 | _____ |
| | p.21 (symmetry) | 12 | _____ |
| | p.25 (fill up with shapes) | 4 | _____ |

| | | | |
|-------------------|---|----|-------|
| Detective Stories | p.4 (Minicomputer, string picture) | 6 | _____ |
| | p.11 (arrow picture, Minicomputer) | 9 | _____ |
| | p.19 (Minicomputer, string picture) | 9 | _____ |
| | p.23 (arrow picture, Minicomputer, strings) | 1 | _____ |
| | p.29 (expressions, Minicomputer, arrow pict.) | 19 | _____ |

| | | | |
|---------------------------|-----------------------------|----|-------|
| Number Sense/Combinations | p.13 (calculator puzzles) | 17 | _____ |
| | p.26 (calculator sentences) | 8 | _____ |
| | p.32 (logic problems) | 7 | _____ |

W11





Selection of Problems #5
(15-6898R)

Student Name _____
Date _____

Responses

| | | | |
|-----------------------------------|--|----|-------|
| Arrows | p.2 (+9, x2) | 12 | _____ |
| | p.5 (+0.3, -1.4) | 6 | _____ |
| | p.7 ($\div 10$) | 7 | _____ |
| | p.11 (addition and multiplication relations) | 14 | _____ |
| | p.19 (+prime numbers) | 8 | _____ |
| | p.24 (pair tags) | 6 | _____ |
| | p.32 (fraction times with + and - relations) | 12 | _____ |
| <hr/> | | | |
| Minicomputer/Abaci | p.29 (weighted checkers) | 6 | _____ |
| <hr/> | | | |
| Strings | p.9 (<i>String Game</i> with numbers) | 14 | _____ |
| | p.13 (multiples, prime numbers) | 9 | _____ |
| | p.30 (counting problems) | 7 | _____ |
| <hr/> | | | |
| Calculations with +, -, x, \div | p.4 (addition, subtraction puzzles) | 14 | _____ |
| | p.18 (algorithm puzzles) | 32 | _____ |
| <hr/> | | | |
| Fractions | p.14 (division and fractions) | 7 | _____ |
| | p.17 (fractional parts of shapes, addition) | 5 | _____ |
| | p.22 (multiplication of fractions) | 9 | _____ |
| | p.23 (ordering fractions) | 18 | _____ |
| | p.26 (fractional parts of shapes) | 4 | _____ |
| <hr/> | | | |
| Geometry and Measurement | p.8 (maps of cubes) | 6 | _____ |
| | p.10 (length and area) | 5 | _____ |
| | p.25 (complete parallelograms on grid) | 10 | _____ |
| | p.28 (maps of cubes) | 6 | _____ |
| <hr/> | | | |
| Detective Stories | p.3 (Minicomputer, string picture) | 6 | _____ |
| | p.16 (arrow picture, string picture) | 10 | _____ |
| | p.20 (arrow combinations, fraction times) | 16 | _____ |
| | p.27 (is less than, string picture) | 2 | _____ |
| | p.31 (string picture, MC, calc. relations) | 11 | _____ |
| <hr/> | | | |
| Number Sense/Combinations | p.6 (calculator puzzles) | 12 | _____ |
| | p.12 (decimal and fraction number lines) | 16 | _____ |
| | p.15 (coordinate points) | 9 | _____ |
| | p.21 (coordinate points) | 15 | _____ |

Selection of Problems #6
(15-6906R)

Student Name _____
Date _____

Responses

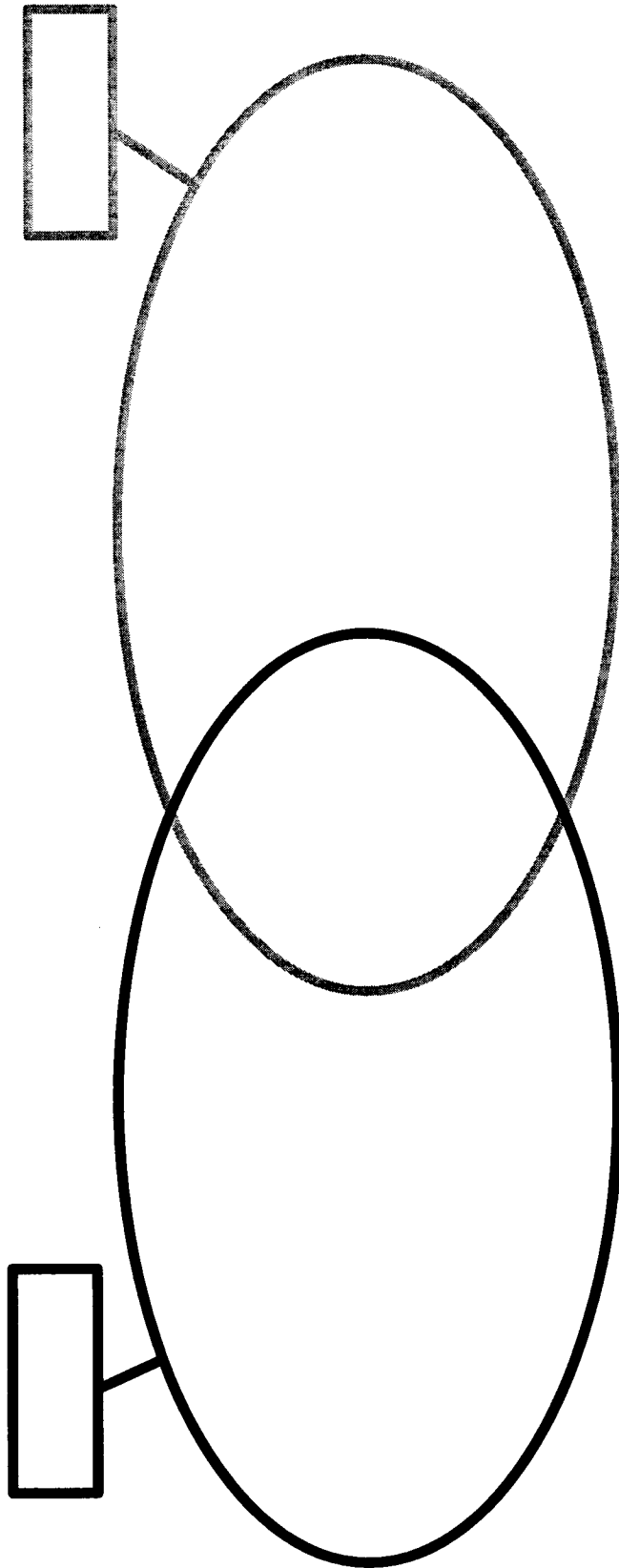
| | | | |
|-----------------------------------|--|----|-------|
| Arrows | p.3 (pair tags) | 6 | _____ |
| | p.5 (+0.5, -1.2) | 7 | _____ |
| | p.7 (+ $\frac{2}{5}$) | 12 | _____ |
| | p.8 (-6, $\frac{1}{2}x$) | 12 | _____ |
| | p.15 (x, \div arrows) | 11 | _____ |
| | p.17 (prime factor relation) | 11 | _____ |
| | p.18 (3x) | 8 | _____ |
| | p.27 (composition) | 11 | _____ |
| | p.28 (fraction times) | 9 | _____ |
| | p.30 (fraction times) | 12 | _____ |
| <hr/> | | | |
| Strings | p.4 (primes, less than, multiples) | 12 | _____ |
| | p.22 (divisors, greatest common divisor) | 12 | _____ |
| | p.26 (counting problems) | 4 | _____ |
| <hr/> | | | |
| Calculations with +, -, x, \div | p.10 (algorithm puzzles) | 27 | _____ |
| | p.19 (algorithm puzzles) | 37 | _____ |
| | p.21 (multiplication patterns) | 16 | _____ |
| | p.31 (algorithm puzzles) | 51 | _____ |
| <hr/> | | | |
| Fractions | p.24 (ordering fractions) | 14 | _____ |
| <hr/> | | | |
| Geometry and Measurement | p.12 (area and perimeter) | 8 | _____ |
| | p.20 (area, surface area, volume of cube) | 5 | _____ |
| <hr/> | | | |
| Detective Stories | p.2 (arrow picture, string picture) | 7 | _____ |
| | p.6 (Minicomputer, string picture) | 7 | _____ |
| | p.11 (arrow combinations, fraction times) | 13 | _____ |
| | p.13 (arrow picture, string picture) | 12 | _____ |
| | p.16 (arrow picture, decimal number line) | 15 | _____ |
| | p.23 (parentheses, calc. relations) | 5 | _____ |
| | p.25 (strings, expressions, calc. relations) | 1 | _____ |
| | p.29 (lcm, string picture) | 15 | _____ |
| <hr/> | | | |
| Number Sense/Combinations | p.5 (calculator puzzles) | 16 | _____ |
| | p.14 (coordinate points) | 14 | _____ |
| | p.32 (fair game) | 3 | _____ |

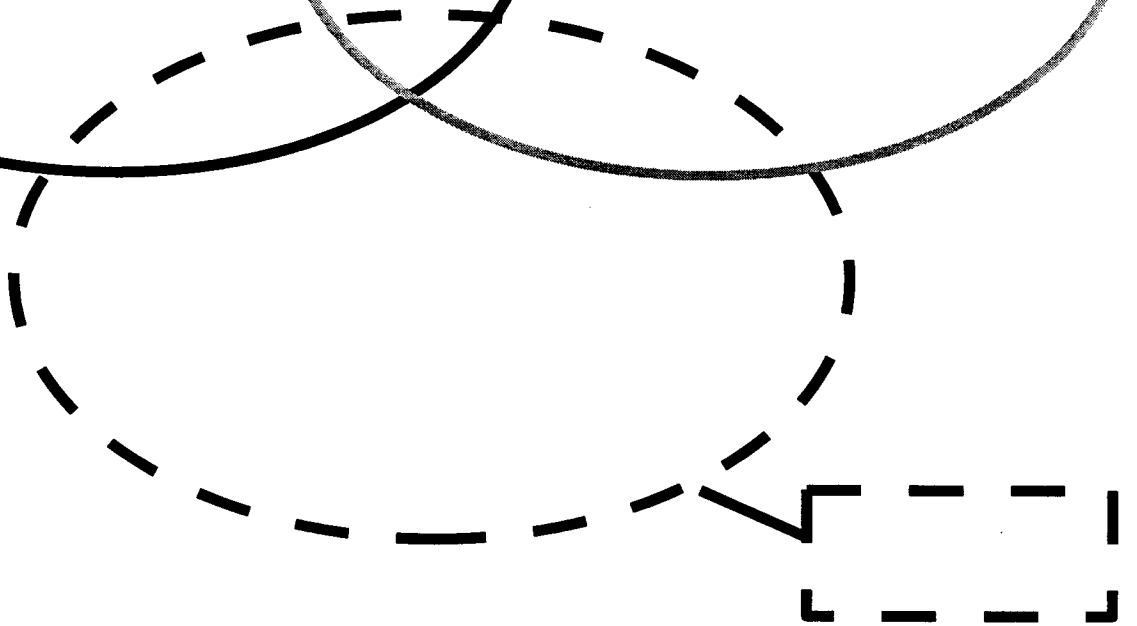
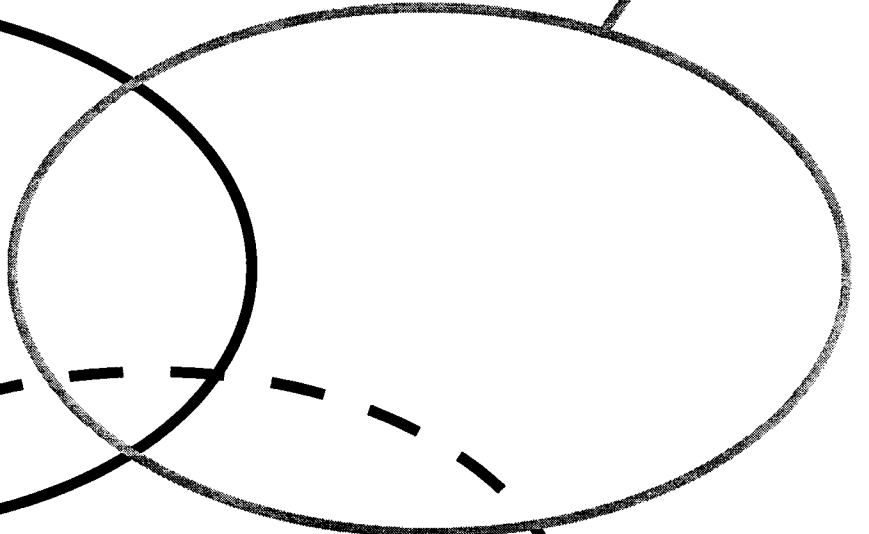
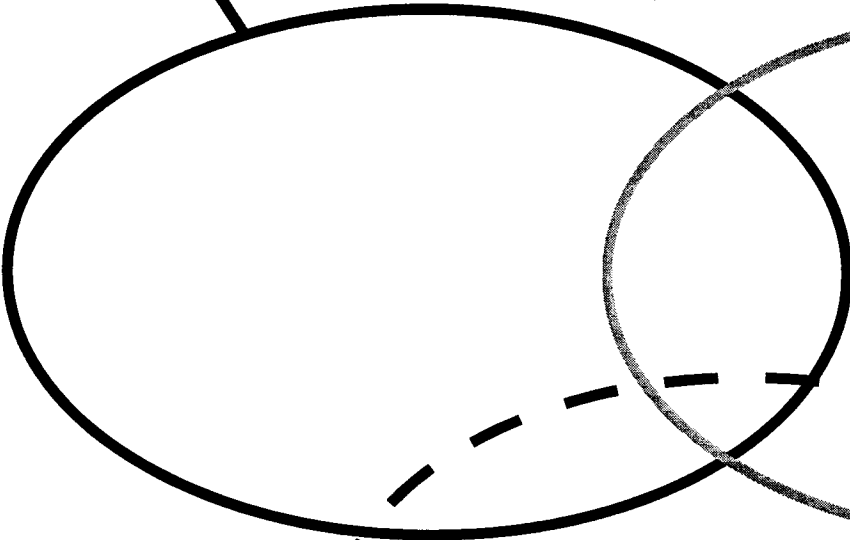
0-109 Numeral Chart

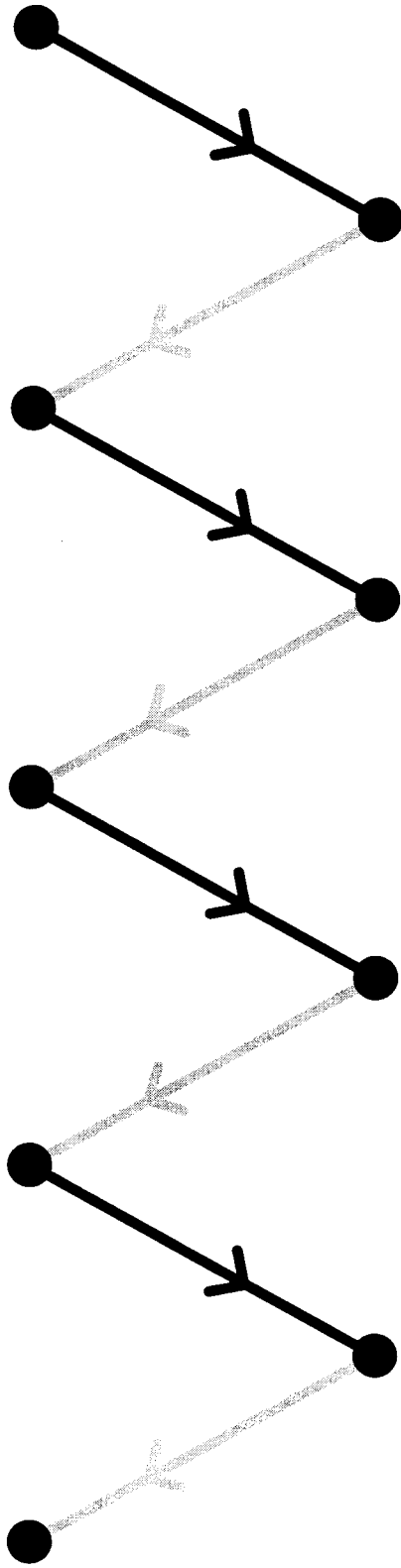
| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 40 | 41 | 42 | 43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

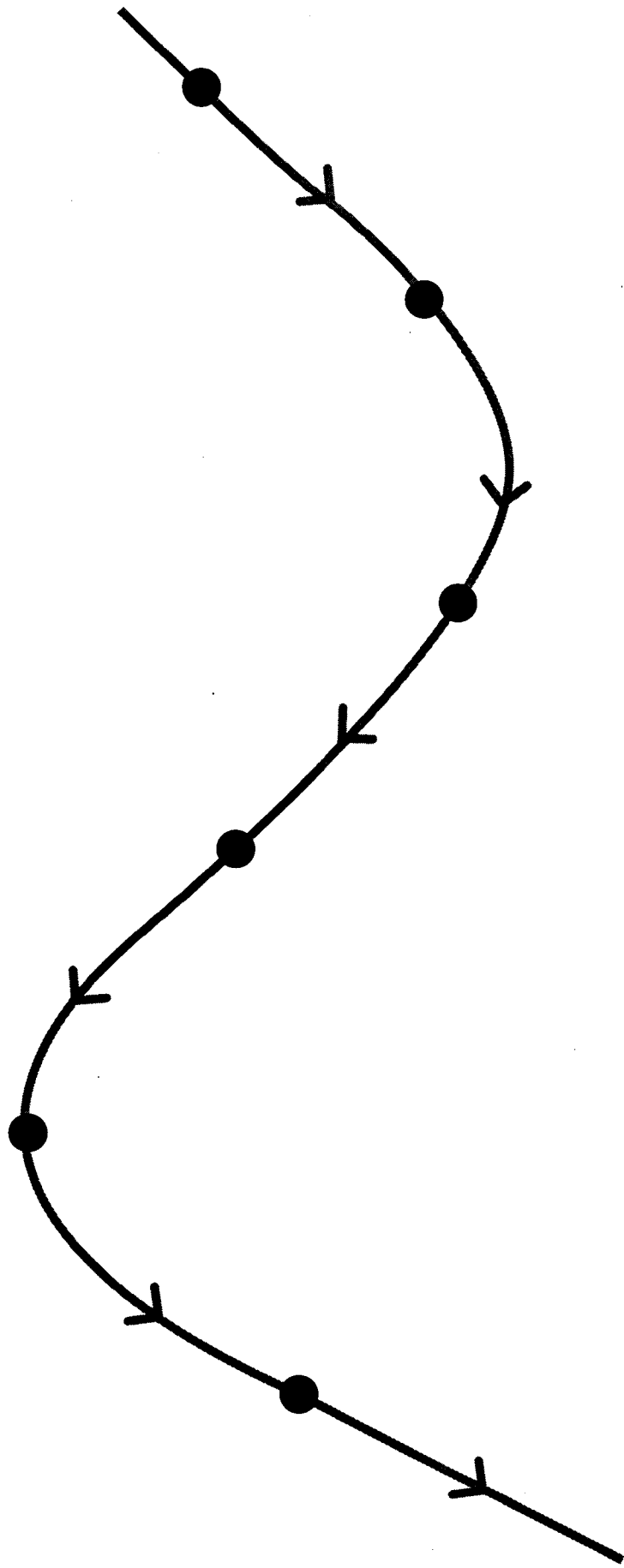
Multiplication Table

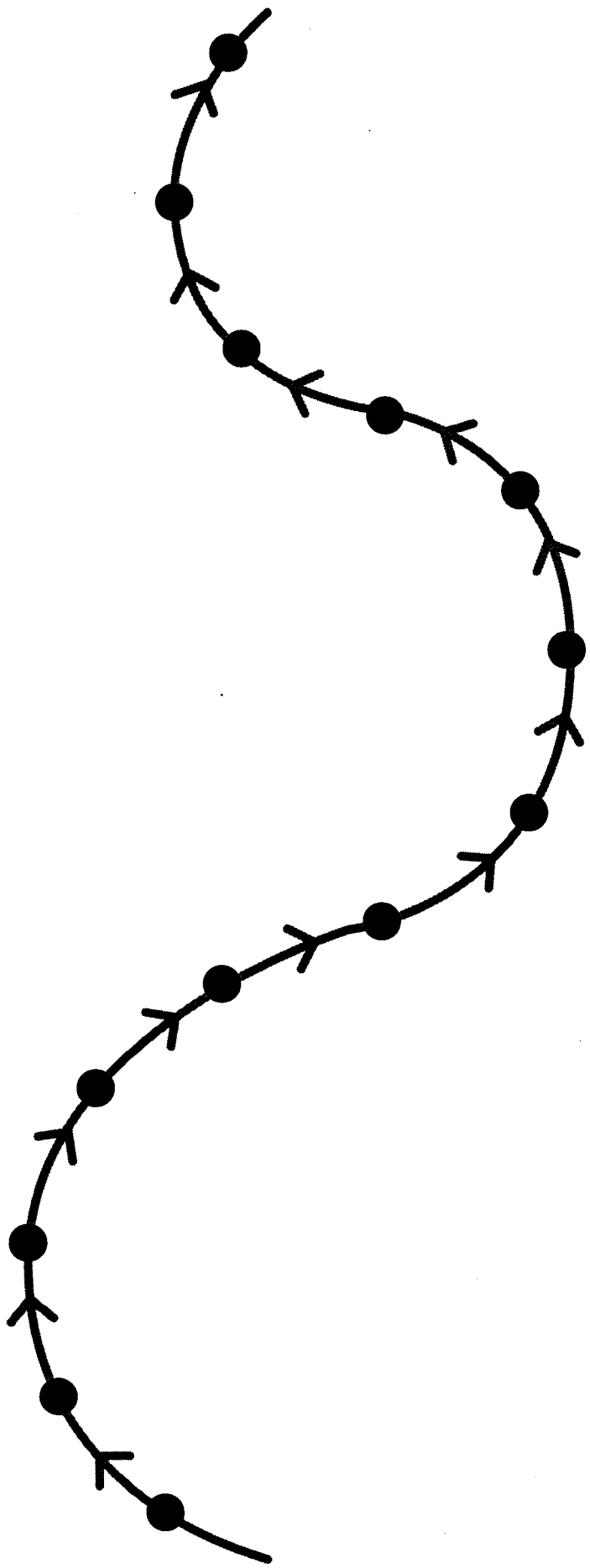
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|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 |
| 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 |
| 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

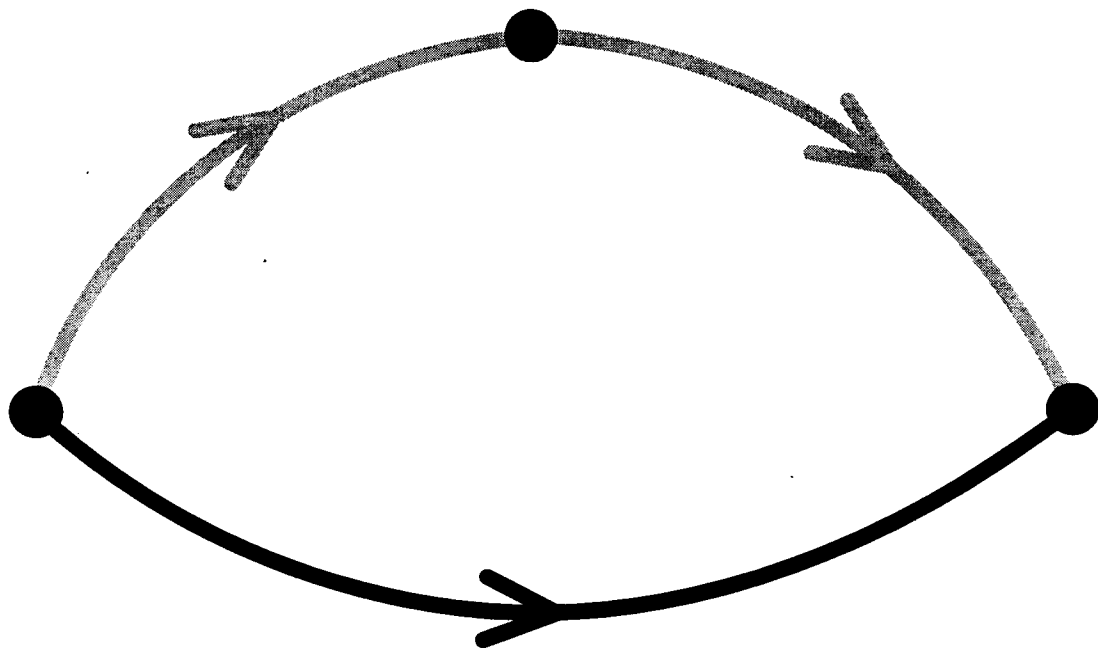
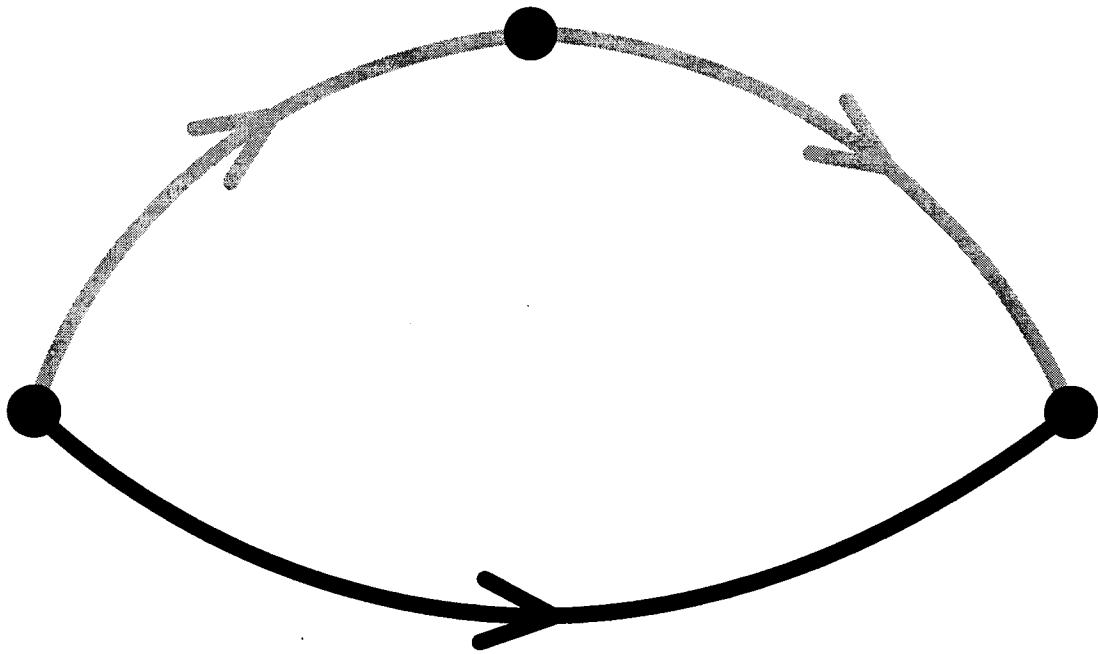


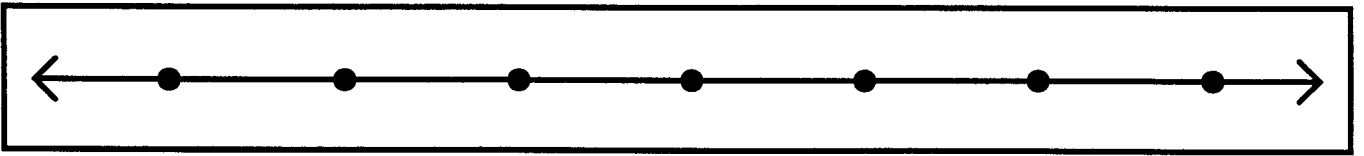
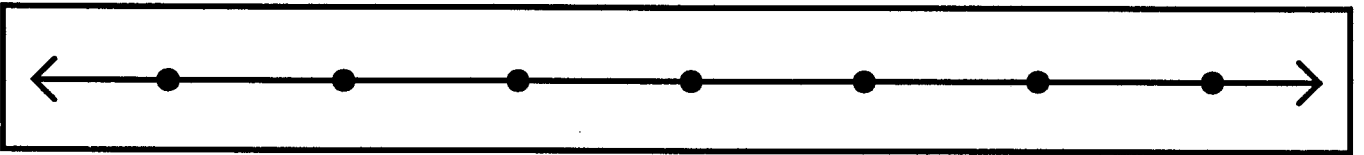
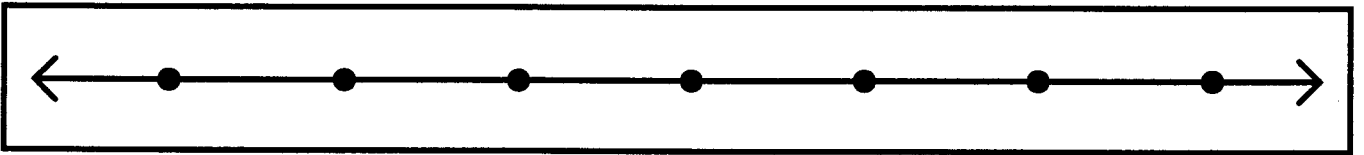
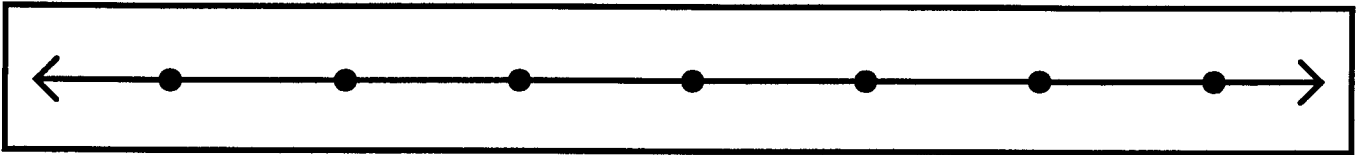
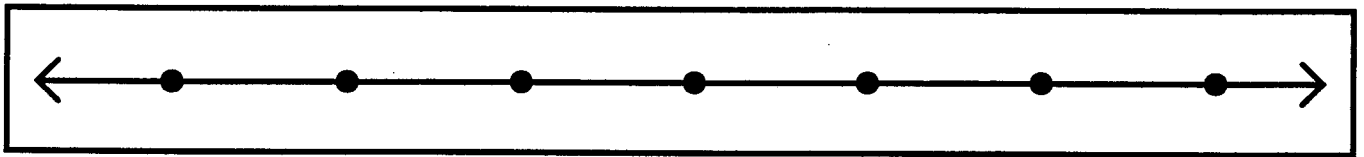


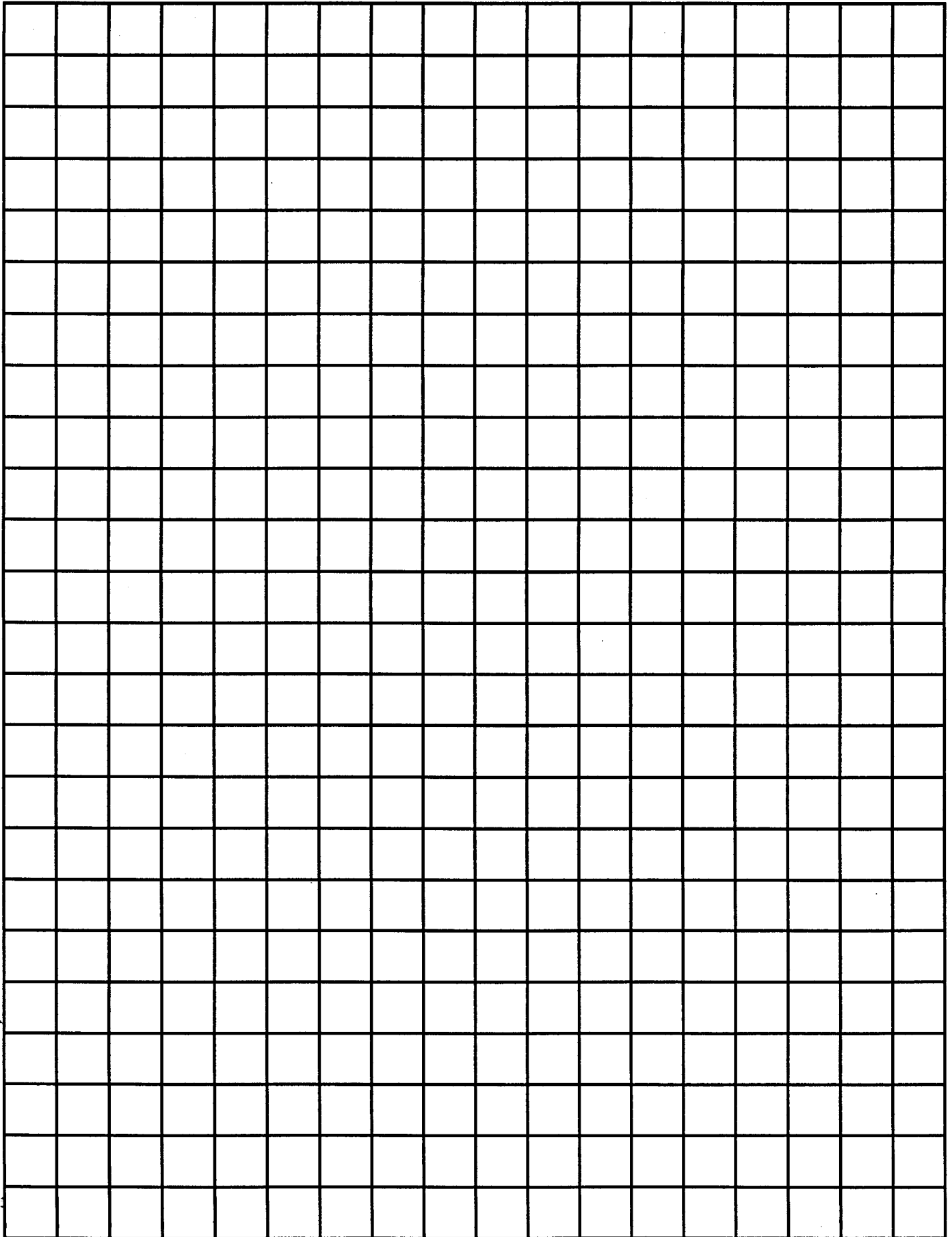


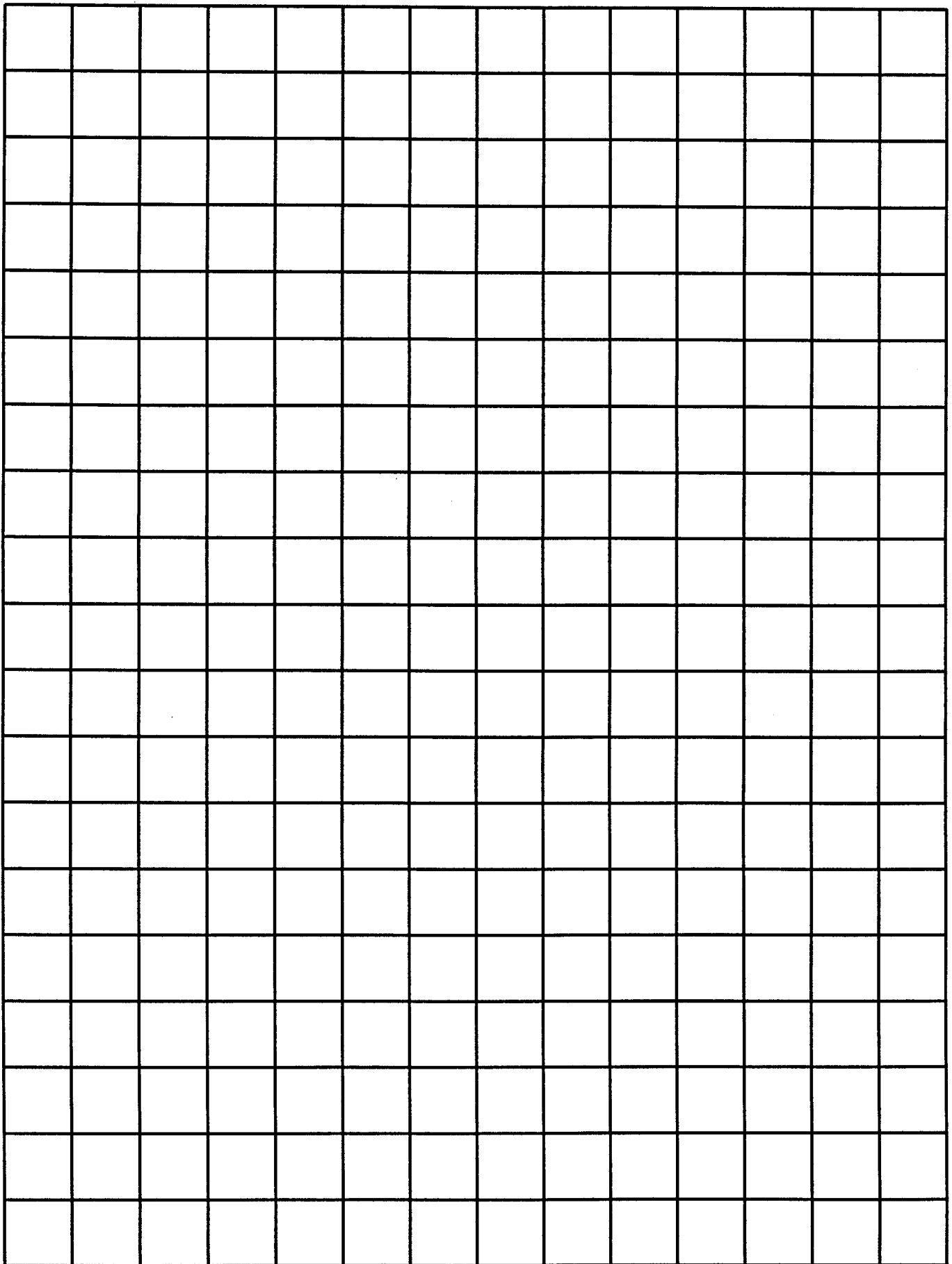


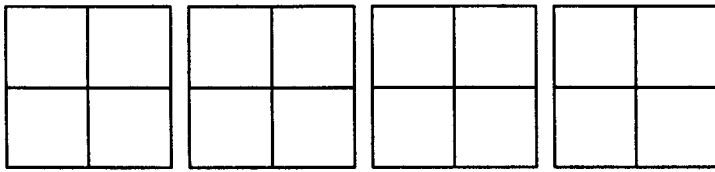
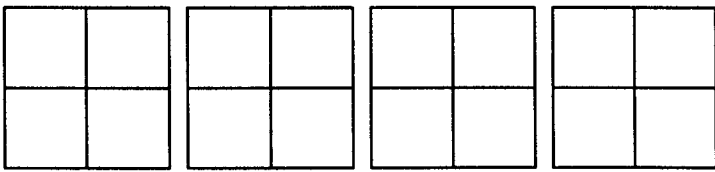
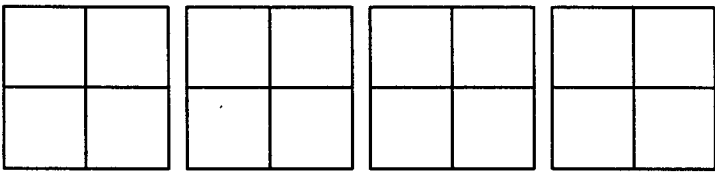
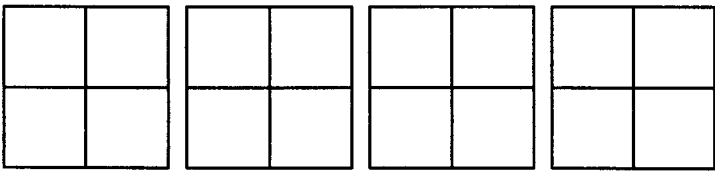
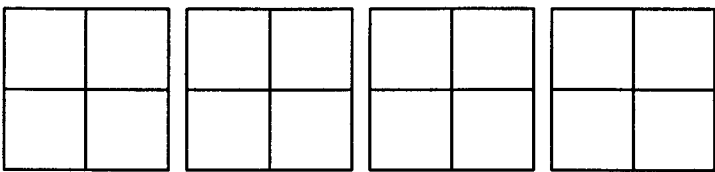
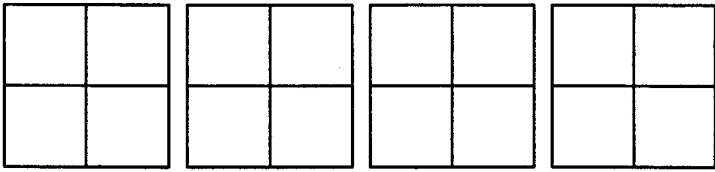
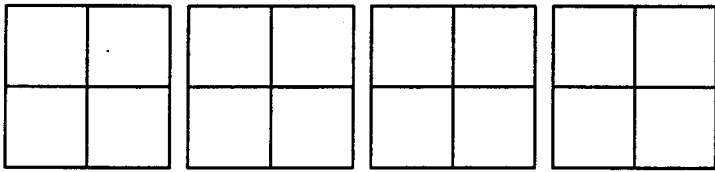


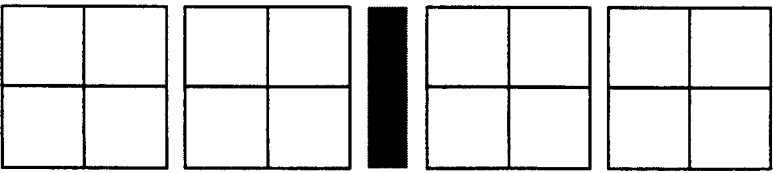
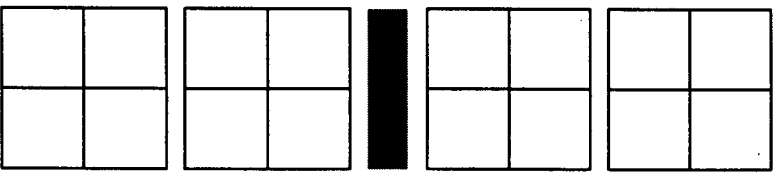
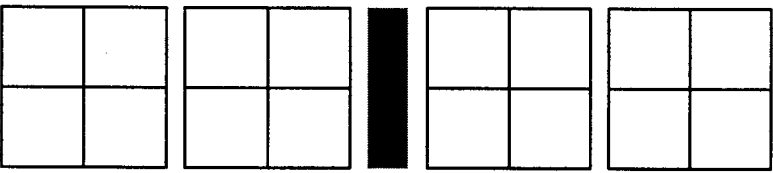
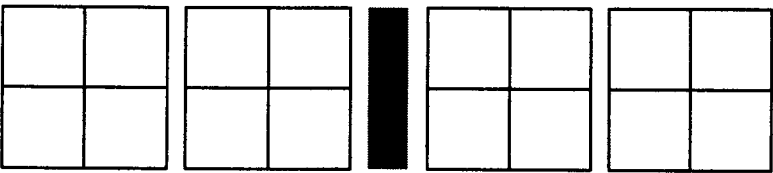
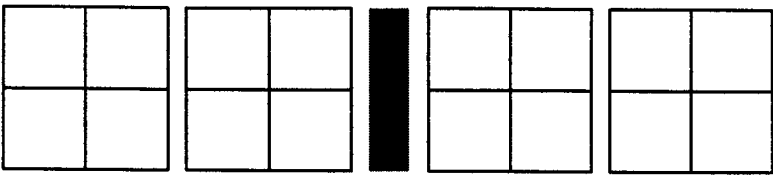
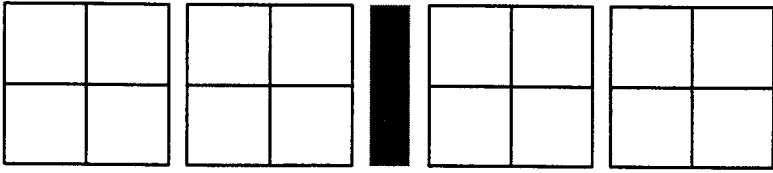
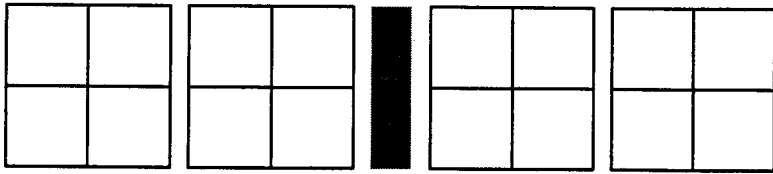




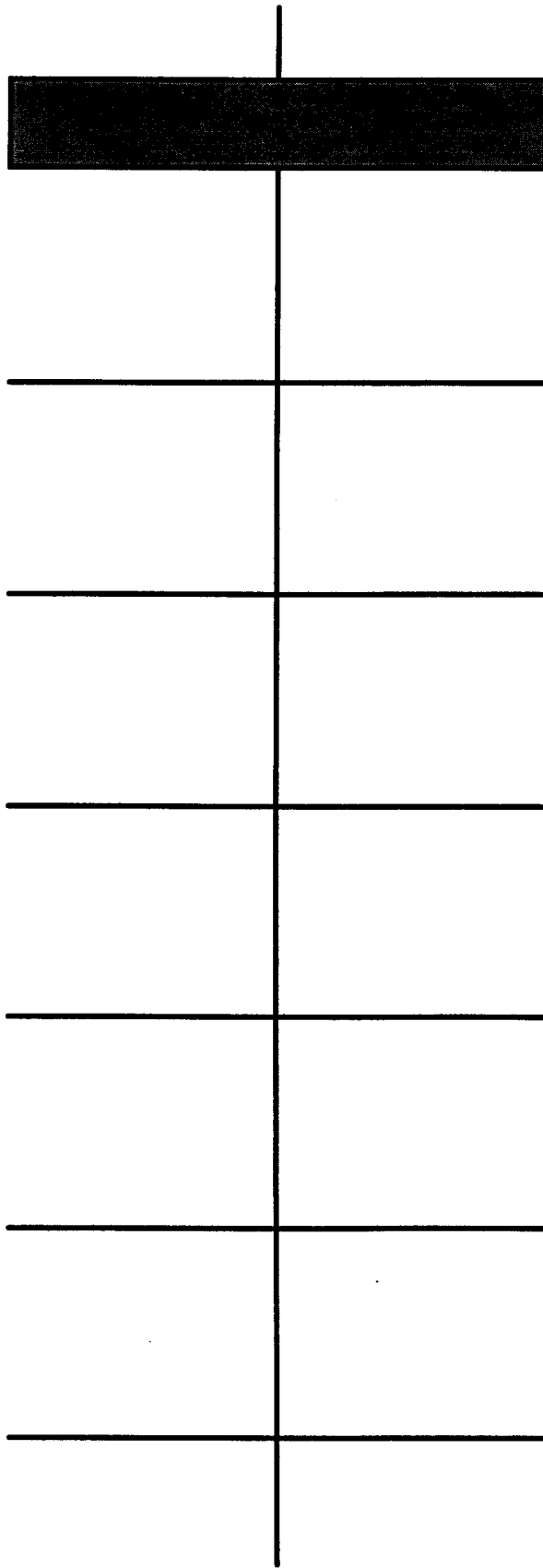








Nabu's Abacus



Name _____

Date _____

Lesson Notes

Things I learned in the math lesson today:

An example:

Name _____

Date _____

Lesson Notes

Things I need to remember from the math lesson today:

Definitions:

Name _____

Date _____

Lesson Notes

Make up your own problem and find a solution. Show the steps and work that you need to do.

Name _____

Date _____

Lesson Notes

Explain in your own words what we did in the math lesson today.