New England Common Assessment Program

Released Items
2005

Grade 4
Mathematics

Mathematics

❶ Look at the information in the box.

9 tens 5 ones 8 hundreds

What number does the information describe?

- ○ A. 589
- ○ B. 895
- ○ C. 958
- ○ D. 985

❷ What decimal represents one-fourth of a dollar?

- ○ A. $ 0.05
- ○ B. $ 0.25
- ○ C. $ 2.50
- ○ D. $25.00

❸ Which set of cards is in order from **least** to **greatest**?

○ A.

893	871	854	828

○ B.

828	854	871	893

○ C.

871	893	854	828

○ D.

854	828	871	893

4 Anna and Chris are solving this problem.

> There are 4 bags of oranges. There are 6 oranges in each bag. How many oranges are there in all?

Anna writes $6+6+6+6=\square$.
Chris writes $6\times 4=\square$.

Who has written a correct number sentence?

- ○ A. only Anna
- ○ B. only Chris
- ○ C. both Anna and Chris
- ○ D. not Anna and not Chris

5 Connie baked 7 cakes. She used 3 eggs for each cake. How many eggs did Connie use?

- ○ A. 3
- ○ B. 10
- ○ C. 21
- ○ D. 24

6 A shape has

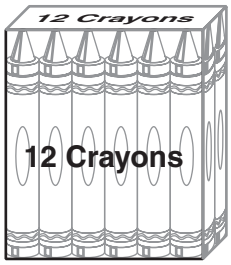
- exactly four angles,
- exactly four sides, and
- sides that are all the same length.

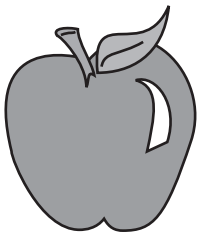
Which could be the shape?

- ○ A. triangle
- ○ B. pentagon
- ○ C. hexagon
- ○ D. rhombus

❼ Which object has a mass of about 1 gram?

○ A.

○ B. 

○ C. 

○ D.

❽ Look at this pattern.

★★■●★★■●★★■●★ _ _ _

What are the next three shapes in the pattern?

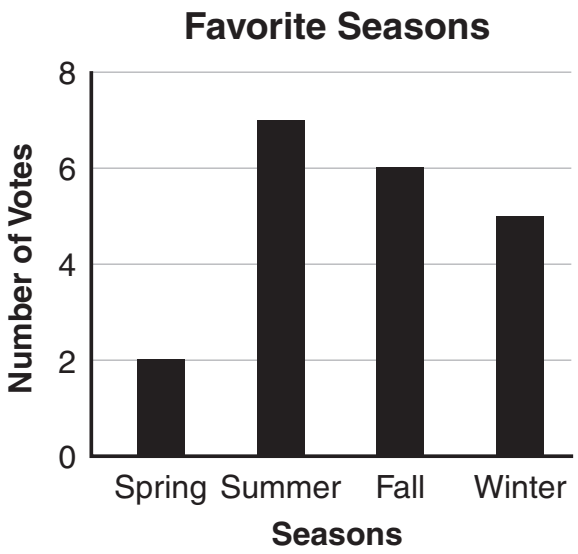
○ A. ★★■

○ B. ★■●

○ C. ●★★

○ D. ■●★

9 Look at this bar graph.



How many more votes did the most favorite season receive than the least favorite season?

- ○ A. 4
- ○ B. 5
- ○ C. 6
- ○ D. 7

10 Lin wrote down the tool each of his friends uses to draw pictures. Look at Lin's list.

Crayons	Crayons	Colored Pencils
Colored Pencils	Markers	Markers
Markers	Crayons	Markers
Markers	Crayons	Colored Pencils

Which tally chart matches Lin's list?

○ A.

Tool	Number of Friends
Crayons	||||
Colored Pencils	||
Markers	~~||||~~|

○ B.

Tool	Number of Friends
Crayons	||||
Colored Pencils	||
Markers	~~||||~~

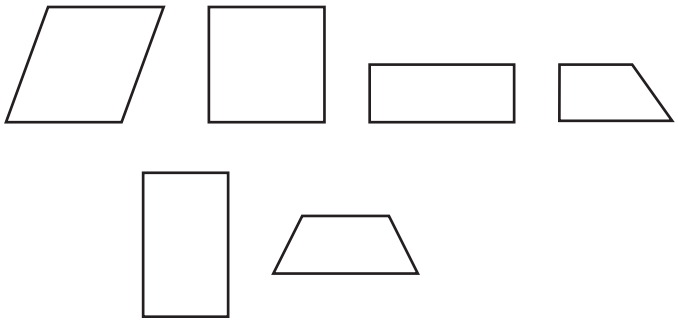
○ C.

Tool	Number of Friends
Crayons	||||
Colored Pencils	|||
Markers	||||

○ D.

Tool	Number of Friends
Crayons	||||
Colored Pencils	|||
Markers	~~||||~~

⓫ Look at these six shapes.



Write one way the six shapes are alike.

⓬ This clock shows the time Terry needed to be at soccer practice.

He was 5 minutes late to practice.

What time did Terry arrive at soccer practice?

13 Look at this number sentence.

$$\triangle + \triangle + \triangle = 7 + 2$$

Each triangle has the same value.

What is the value of each triangle?

14 Fran has three coins. Each coin has a different value. The total value of the coins is less than 30¢.

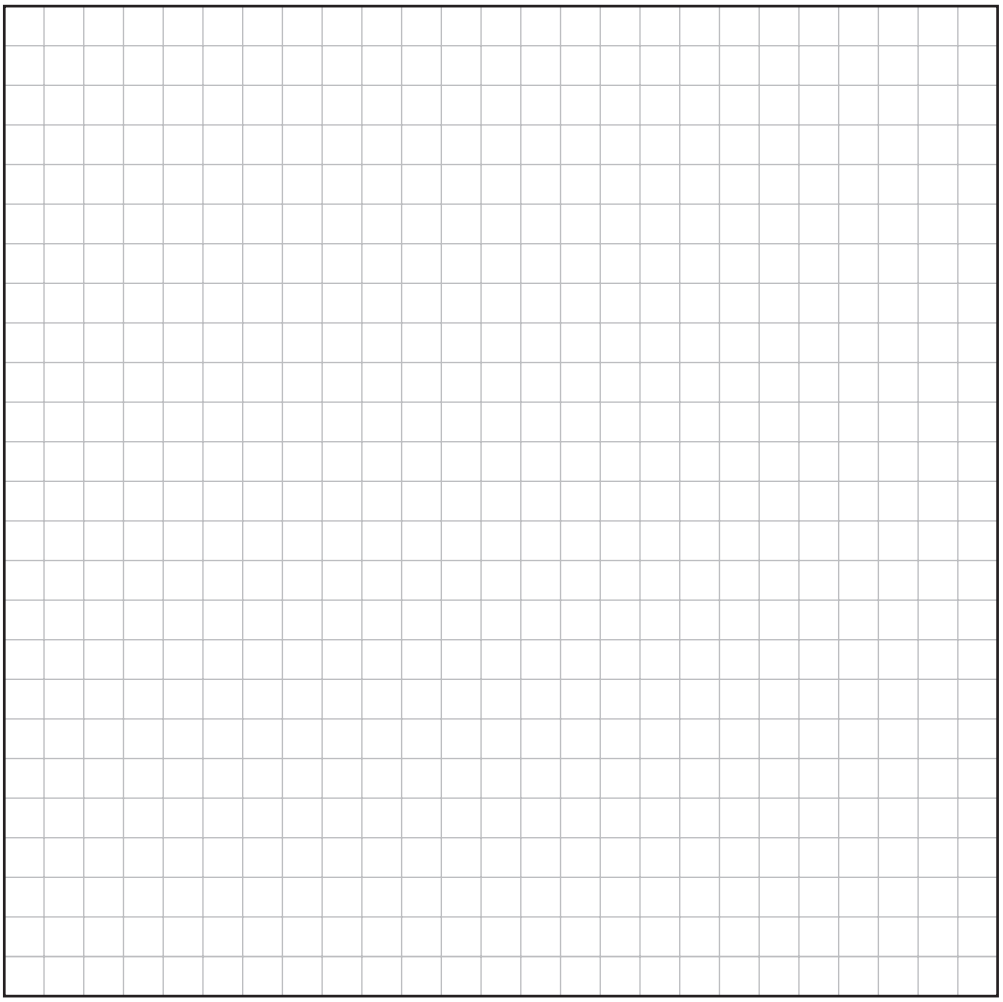
How much money does Fran have? Use a dollar sign ($) and a decimal point (.) to write your answer. Use numbers, words, or pictures to show your work or explain how you know.

15 Jeanne earned $12.50 babysitting and $9.75 mowing the lawn. Then she spent $2.75.

How much money does Jeanne have now? Show your work or explain how you know.

16 Maria wants to make a garden with an area of 24 square feet. The garden must be rectangular.

On the grid below, draw 2 different rectangular gardens Maria could make. The distance around each garden must be different.



Key

represents 1 square foot

Grade 4 Mathematics Released Item Information

Released Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calculator Allowed	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓		✓		
Content Strand[1]	NO	NO	NO	NO	NO	GM	GM	FA	DP	DP	GM	GM	FA	NO	NO	GM
GLE Code	3-1	3-1	3-2	3-3	3-4	3-1	3-7	3-1	3-1	3-3	3-1	3-7	3-4	3-1	3-4	3-6
Depth of Knowledge Code	1	1	1	2	1	1	2	2	2	2	2	2	1	3	2	2
Item Type[2]	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	SA	SA	SA	SA	SA	SA
Answer Key	B	B	B	C	C	D	D	B	B	D						
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2

[1]Content Strand: NO = Numbers & Operations, GM = Geometry & Measurement, FA = Functions & Algebra, DP = Data, Statistics, & Probability

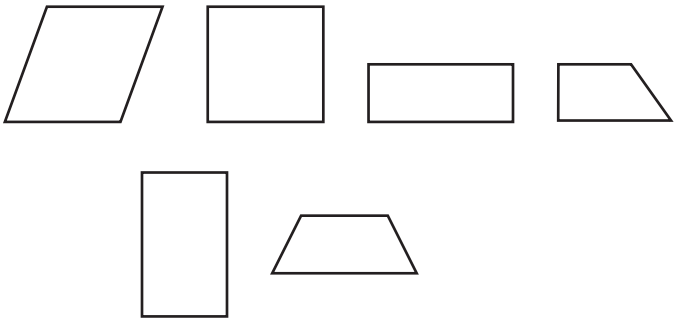
[2]Item Type: MC = Multiple-Choice, SA = Short Answer

New England Common Assessment Program

Released Items Support Materials 2005

Grade 4 Mathematics

11 Look at these six shapes.



Write one way the six shapes are alike.

Scoring Guide:

Score	Description
1	Student names one correct attribute of all given shapes.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Sample Responses:

They all have 4 sides.

They all have 4 angles.

They all have 1 pair of parallel sides.

Score Point 1 (Example A)

They all have 4 angles.

Student names one correct attribute.

Score Point 1 (Example B)

These shapes are alike because they each have four sides

Student names one correct attribute.

Score Point 0 (Example A)

There all hexigons.

Student names an incorrect attribute.

12 This clock shows the time Terry needed to be at soccer practice.

He was 5 minutes late to practice.

What time did Terry arrive at soccer practice?

Scoring Guide:

Score	Description
1	Student provides correct time, **4:35**.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Score Point 1 (Example A)

4:35

Student provides correct time.

Score Point 1 (Example B)

four thirty five

Student provides correct time. Note: Student would receive credit for either a correct written response or a correct pictorial response.

Score Point 0 (Example A)

4:25

Student's answer is incorrect.

Score Point 0 (Example B)

6:24

Student's answer is incorrect.

13 Look at this number sentence.

$$\triangle + \triangle + \triangle = 7 + 2$$

Each triangle has the same value.

What is the value of each triangle?

Scoring Guide:

Score	Description
1	Student gives correct value of triangle, **3**.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Score Point 1 (Example A)

3

Student gives the correct value.

Score Point 1 (Example B)

Look at this number sentence.

Student gives the correct value.

3 3 3 9

△ + △ + △ = 7 + 2

Each triangle has the same value.
What is the value of each triangle?

9 first cl add 7+2= then cl thought what ×3=9? cl knew 3×3=9 so that is your answer.

Although included and correct, explanation is not necessary for credit.

SCORE POINT 0 (EXAMPLE A)

9

Student's answer is incorrect.

14 Fran has three coins. Each coin has a different value. The total value of the coins is less than 30¢.

How much money does Fran have? Use a dollar sign ($) and a decimal point (.) to write your answer. Use numbers, words, or pictures to show your work or explain how you know.

Scoring Guide:

Score	Description
2	Student has correct answer, **$0.16**, written with a dollar sign and a decimal point, and gives appropriate strategy or explanation.
1	Student has correct answer, written with a dollar sign and a decimal point. OR Student shows appropriate strategy or explanation.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Sample Response:

$0.16; She has a penny, nickel, and dime.

Score Point 2 (Example A)

10 5 1 = 16¢

$0.16

Student provides appropriate strategy and has correct answer, with a dollar sign and a decimal point. (2 points)

Score Point 2 (Example B)

$0.16

I know that Fran has $0.16 because a dime, a nickel and a penny are both different values and they add up to be less than 30¢.

Student provides appropriate strategy and has correct answer, with a dollar sign and a decimal point. (2 points)

Score Point 1 (Example A)

$0.16

Student has correct answer (1 point) with no strategy or work shown (0 points).

Score Point 1 (Example B)

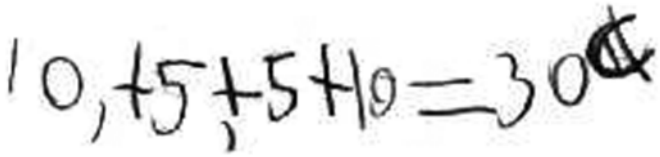
.11¢
.5¢
.10¢ 16¢

Student provides an appropriate strategy (1 point) but does not write answer with a dollar sign and a decimal point (0 points).

Score Point 0 (Example A)

Student's answer is incorrect. (0 points)

Score Point 0 (Example B)



Student's strategy is incorrect. (0 points)

15 Jeanne earned $12.50 babysitting and $9.75 mowing the lawn. Then she spent $2.75. How much money does Jeanne have now? Show your work or explain how you know.

Scoring Guide:

Score	Description
2	Student writes correct answer, **$19.50**, and provides appropriate strategy or explanation.
1	Student writes correct answer. OR Student provides appropriate strategy or explanation and one correct computation.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Sample Response:

$12.50 + $9.75 = $22.25, and $22.25 – $2.75 = $19.50

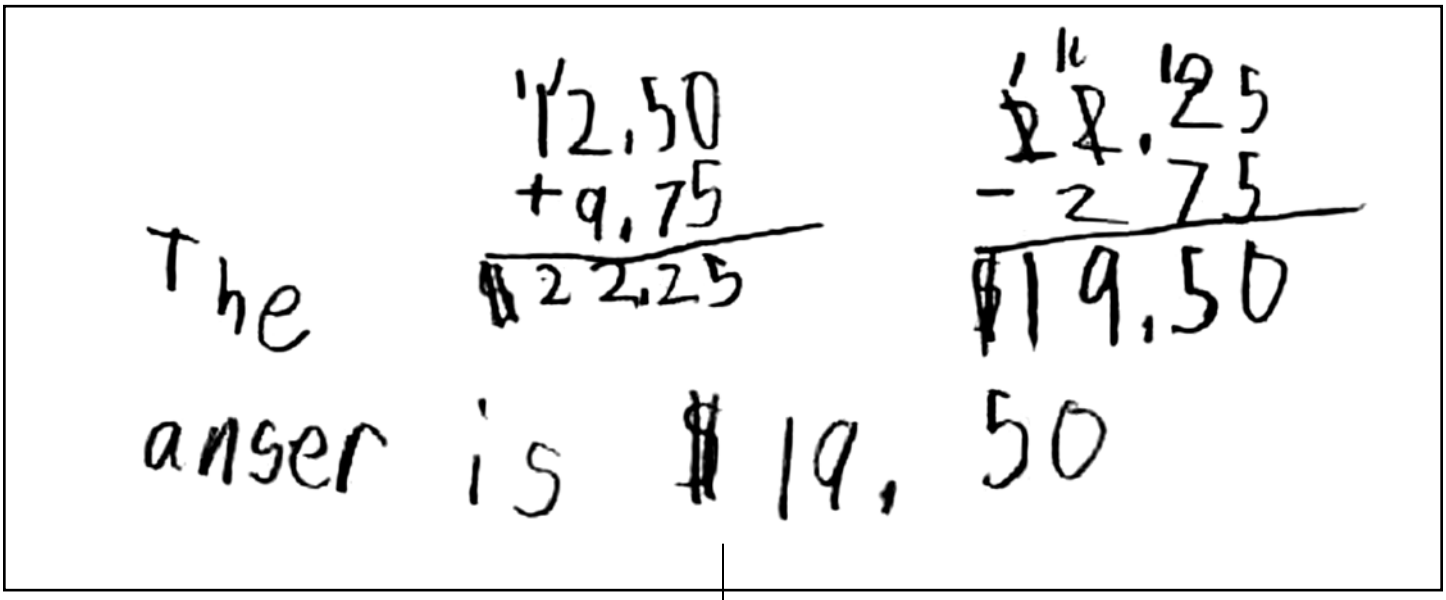
Notes:

- An equation is an acceptable explanation.
- One transposition or one copy error (can only drop or transpose 1 digit) with all computations correct receives a score 2

  Example of transposition error: $12.50 + $9.57 = $22.07, and $22.07 – $2.75 = $19.32

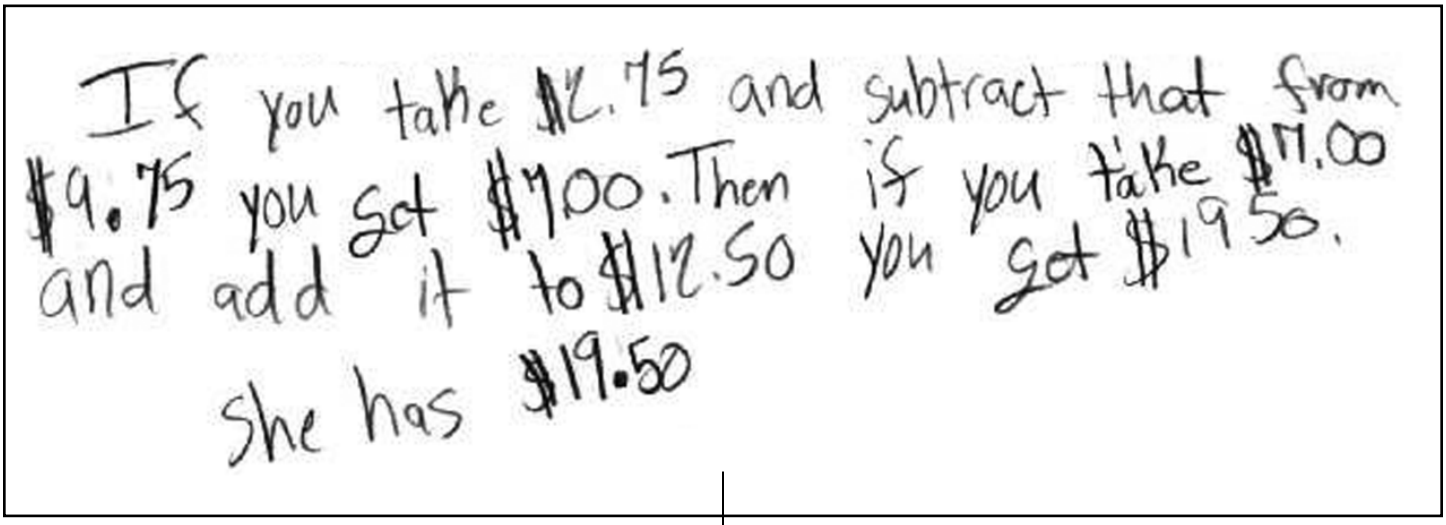
  Example of copy error: $12.50 + $9.75 = $22.25, and $22.25 – $2.55 = $19.70

Score Point 2 (Example A)



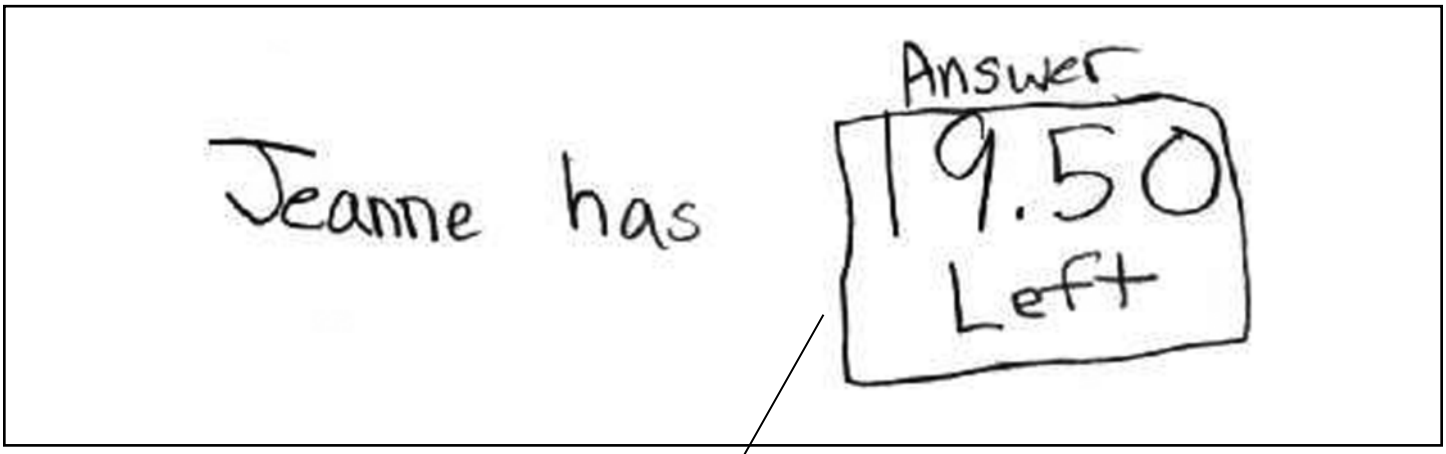
Student provides an appropriate strategy and has correct answer. (2 points)

Score Point 2 (Example B)



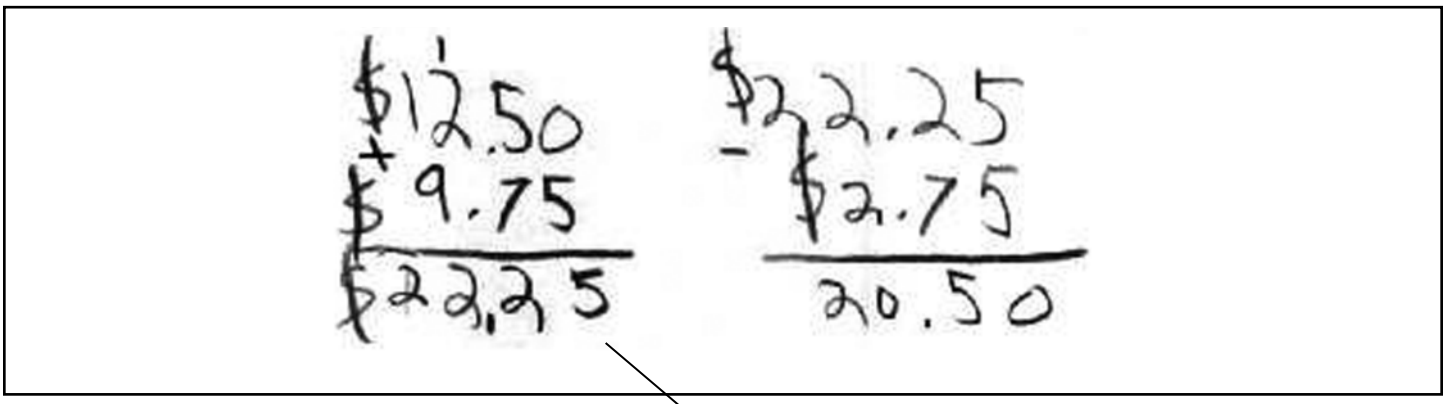
Student provides an appropriate strategy and has correct answer. (2 points)

Score Point 1 (Example A)



Student has correct answer (1 point) with no strategy or work shown (0 points).

Score Point 1 (Example B)



Student provides an appropriate strategy with one correct computation. (1 point)

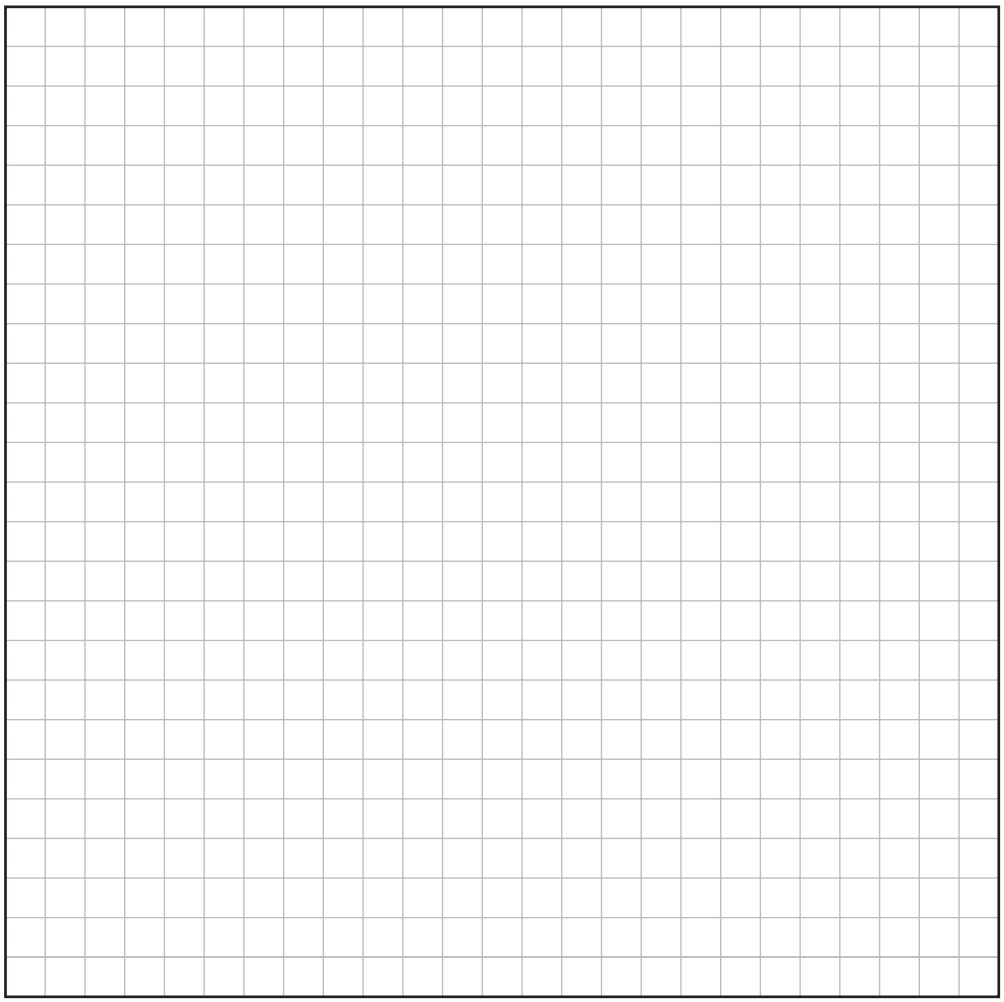
Score Point 0 (Example A)

$12.50+$9.75=$13.25

Student's strategy is incorrect. (0 points)

16 Maria wants to make a garden with an area of 24 square feet. The garden must be rectangular.

On the grid below, draw 2 different rectangular gardens Maria could make. The distance around each garden must be different.



Key

represents 1 square foot

Scoring Guide:

Score	Description
2	Student draws two distinct rectangles with dimensions yielding an area of 24 square feet.
1	Student draws one distinct rectangle with dimensions yielding an area of 24 square feet.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	no response

Correct dimension examples:

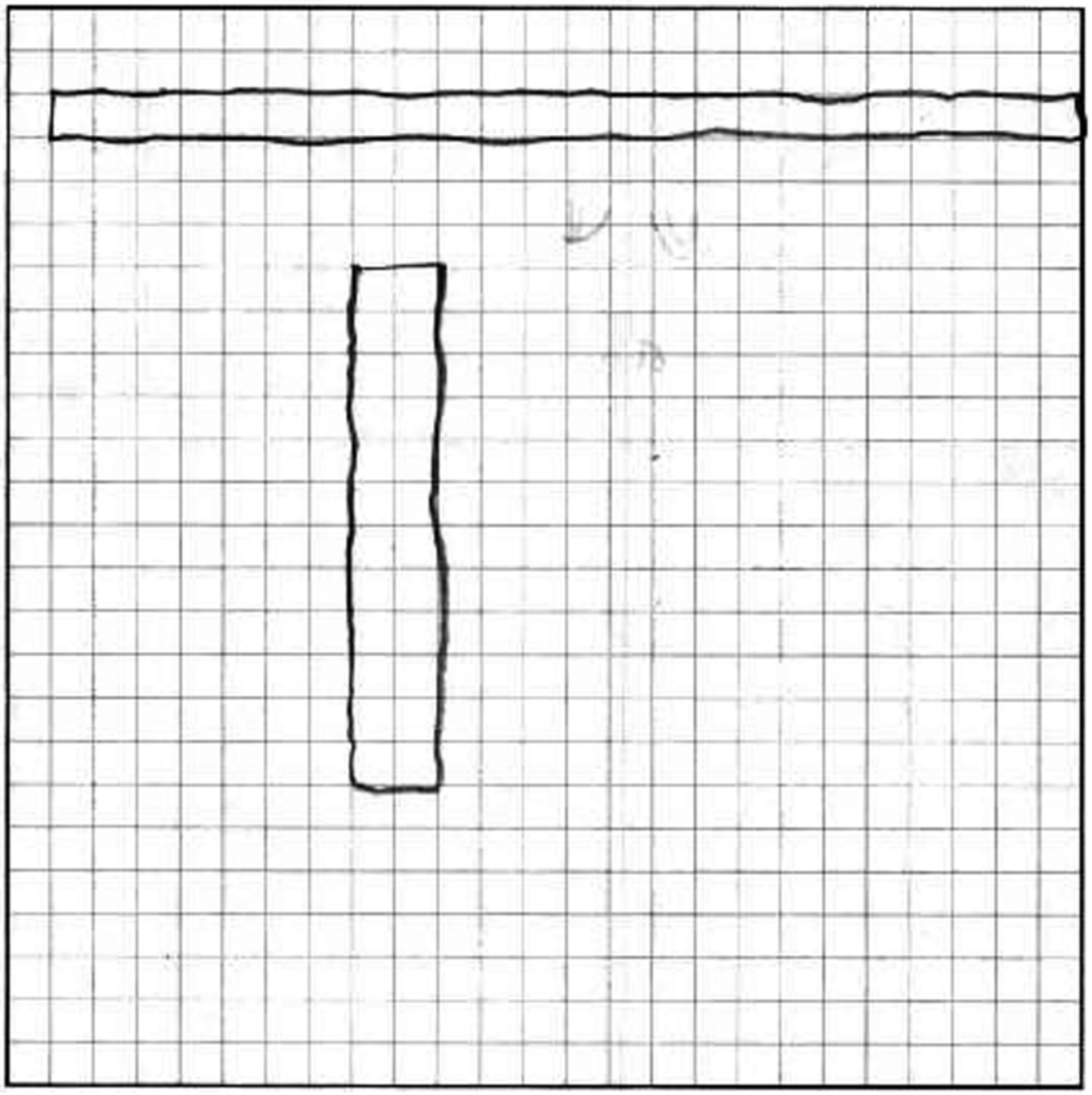
1 foot by 24 feet

2 feet by 12 feet

3 feet by 8 feet

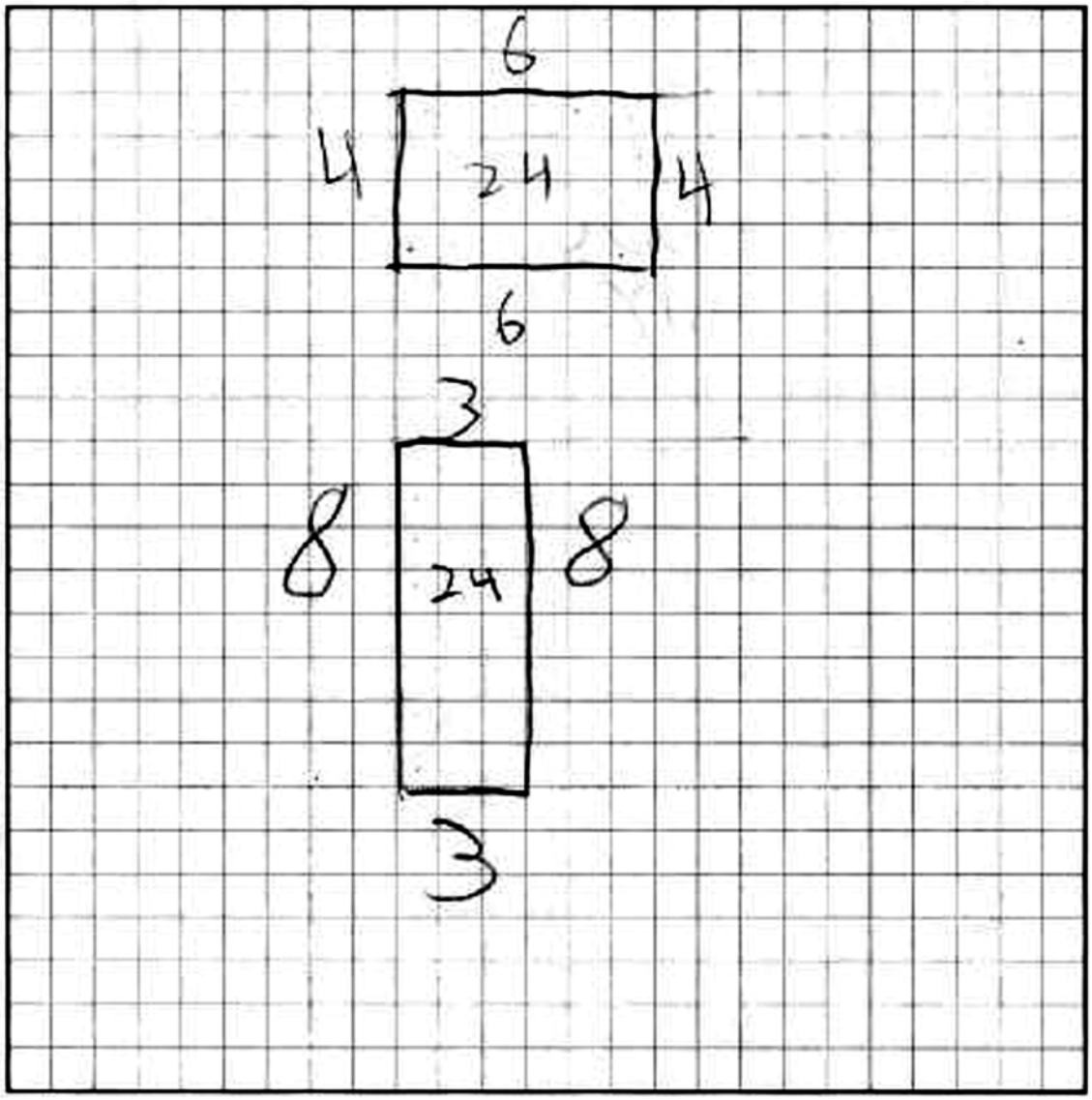
4 feet by 6 feet

Score Point 2 (Example A)



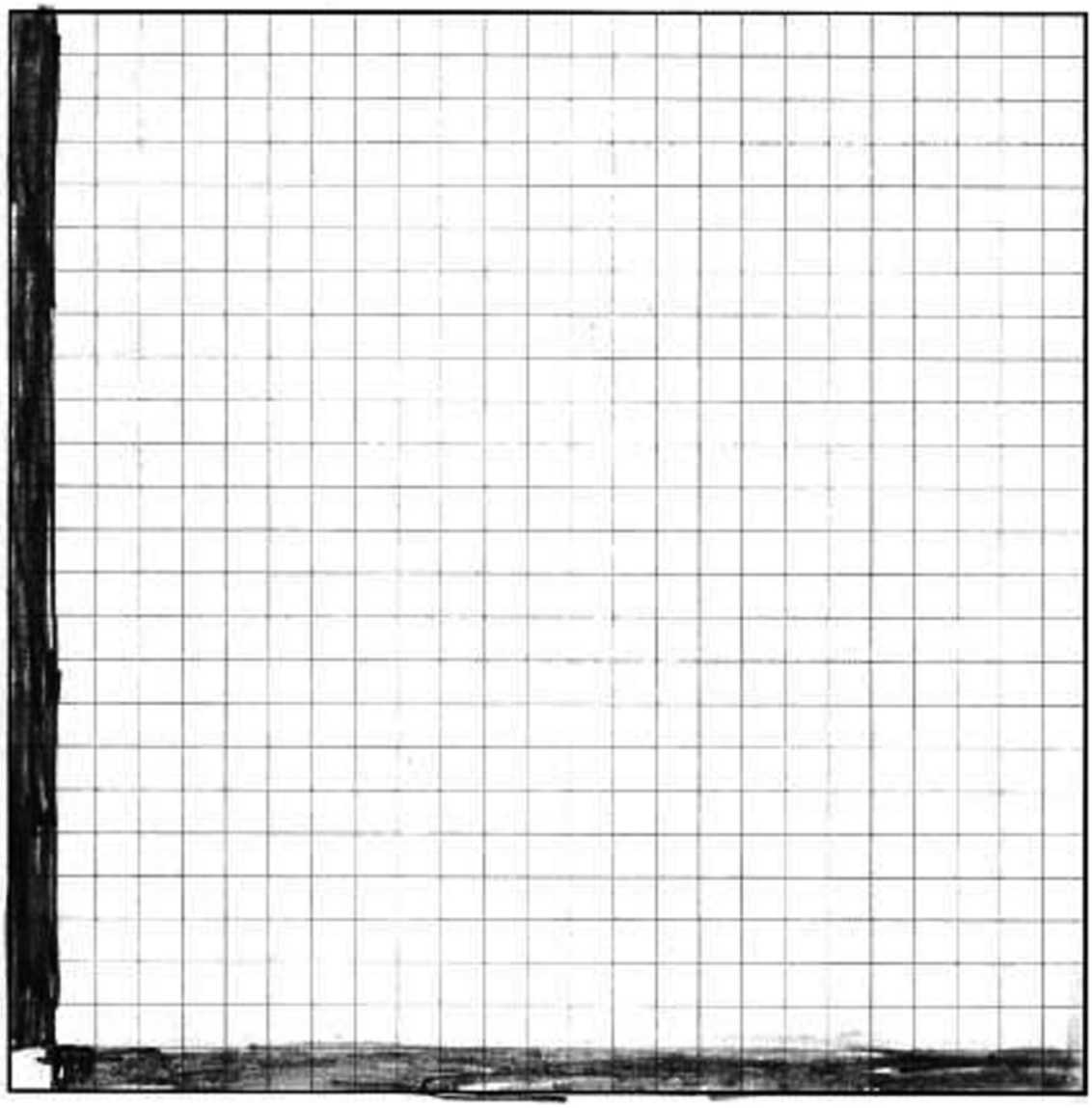
Student draws two noncongruent rectangles, each with an area of 24 square feet. (2 points)

SCORE POINT 2 (EXAMPLE B)



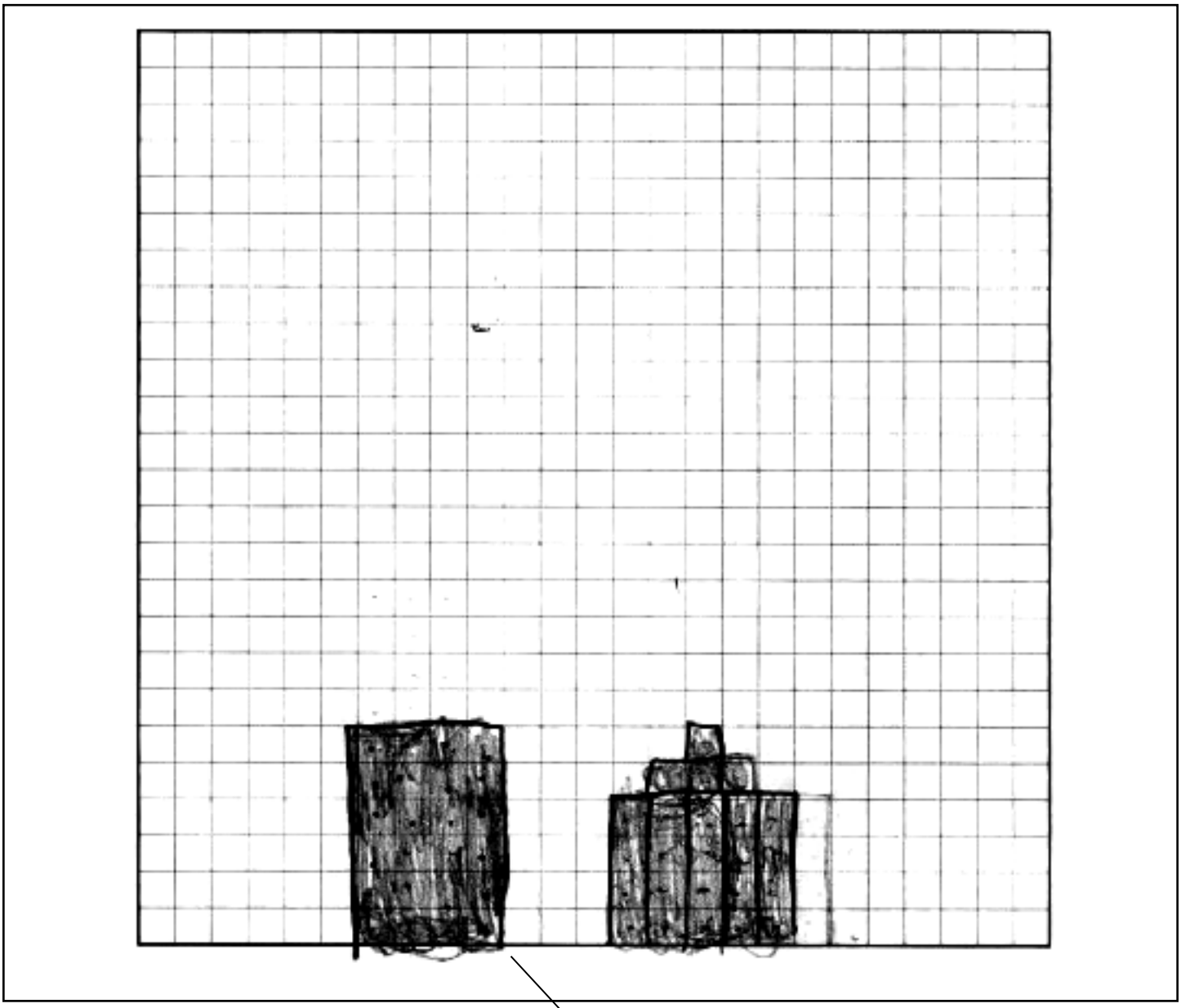
Student draws two noncongruent rectangles, each with an area of 24 square feet. (2 points)

Score Point 1 (Example A)



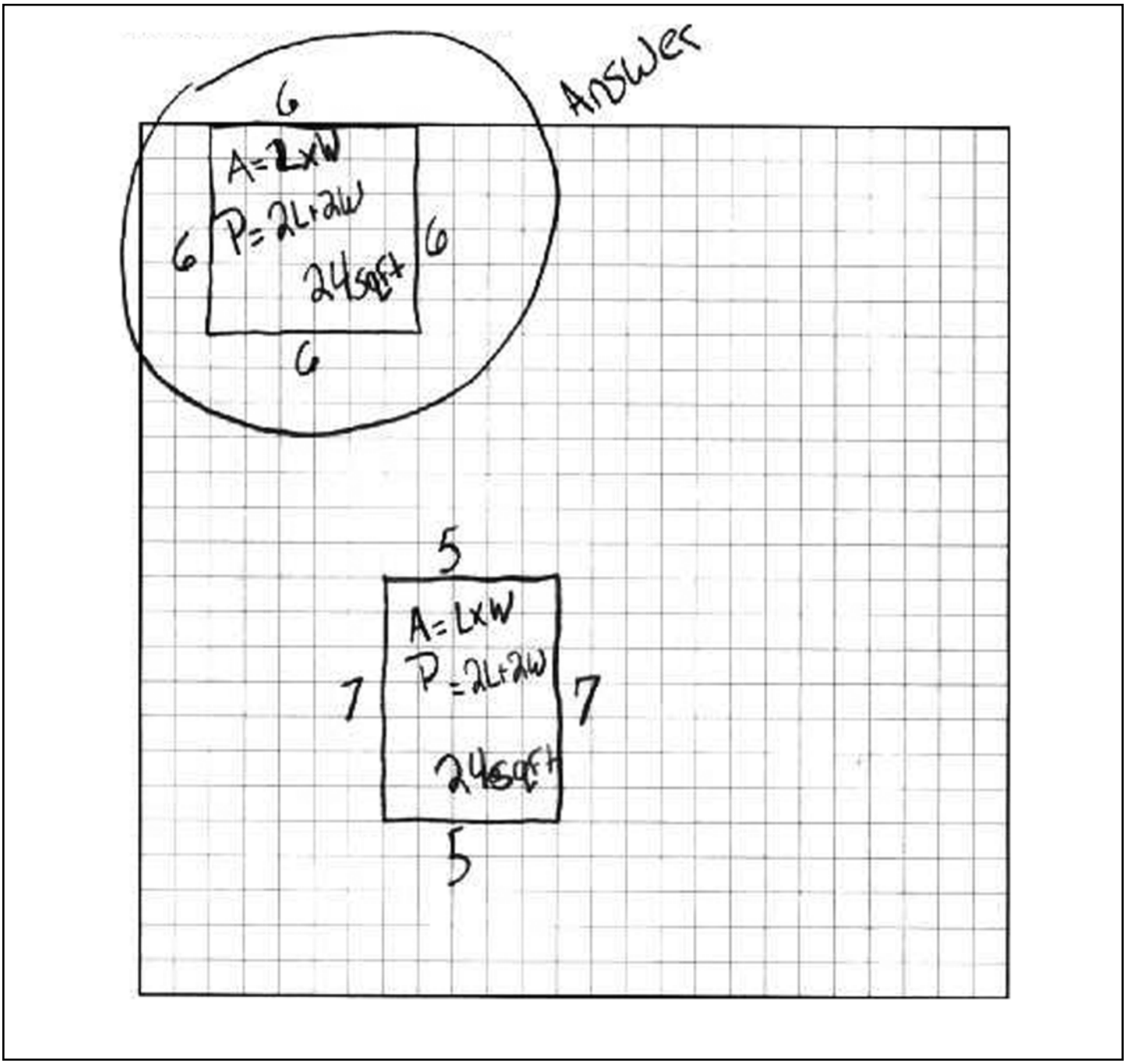
Student draws two congruent rectangles, each with an area of 24 square feet. (1 point)

SCORE POINT 1 (EXAMPLE B)



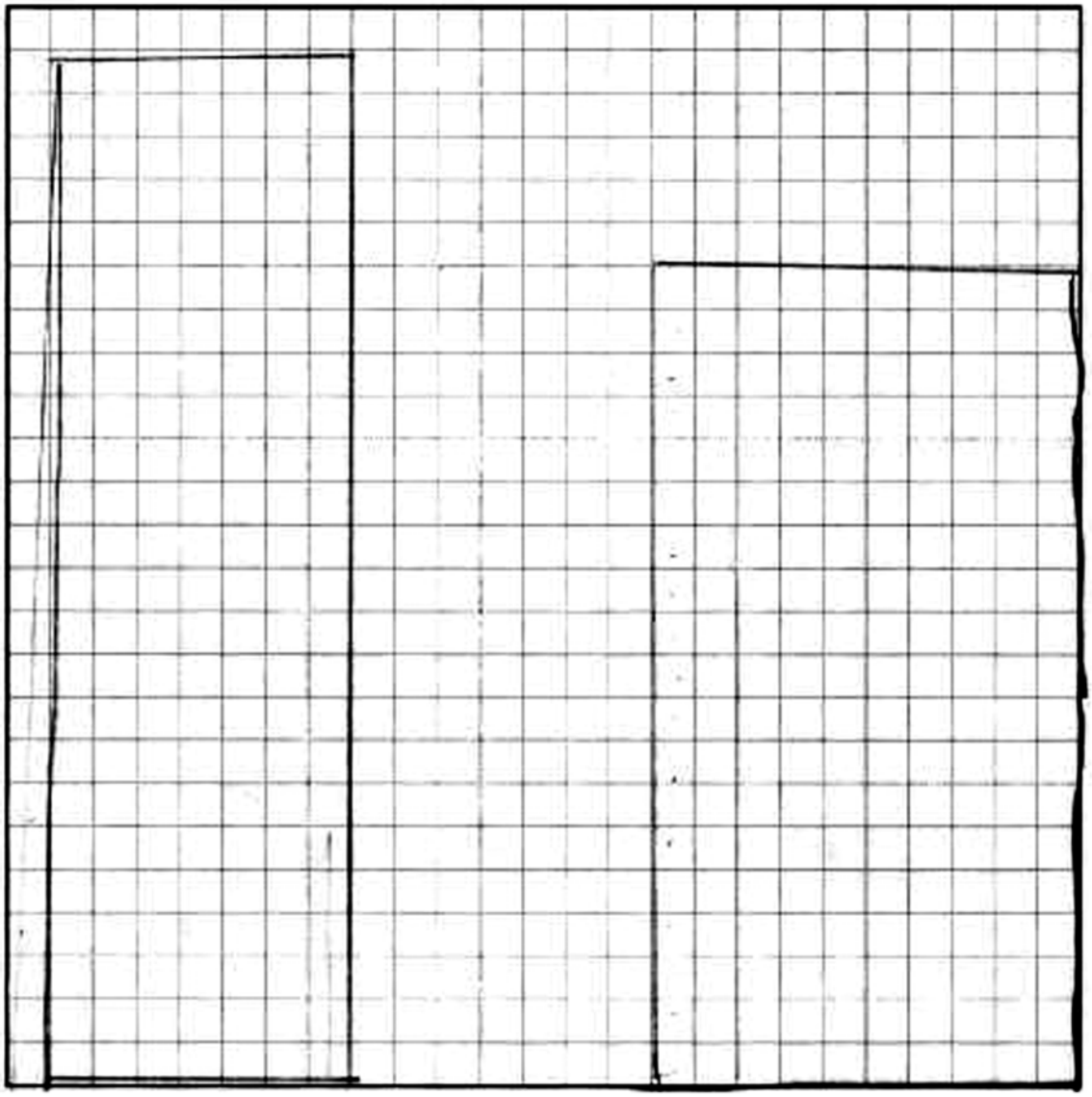
Student draws one rectangle with an area of 24 square feet. (1 point)

SCORE POINT 0 (EXAMPLE A)



Student's response is incorrect because student shows two noncongruent rectangles with the same perimeter and different areas. (0 points)

Score Point 0 (Example B)



Student shows two noncongruent rectangles that do not have the correct area of 24 square feet. (0 points)