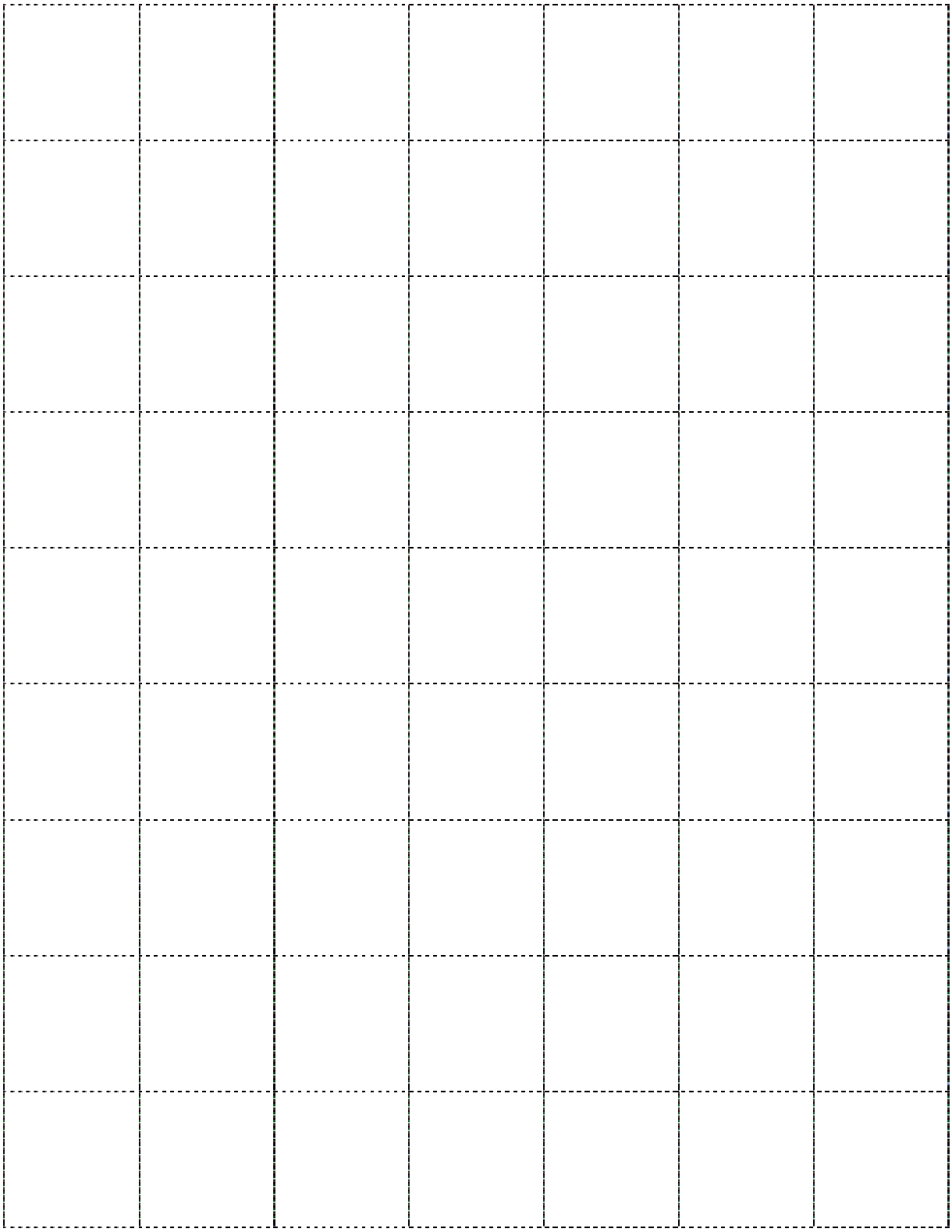
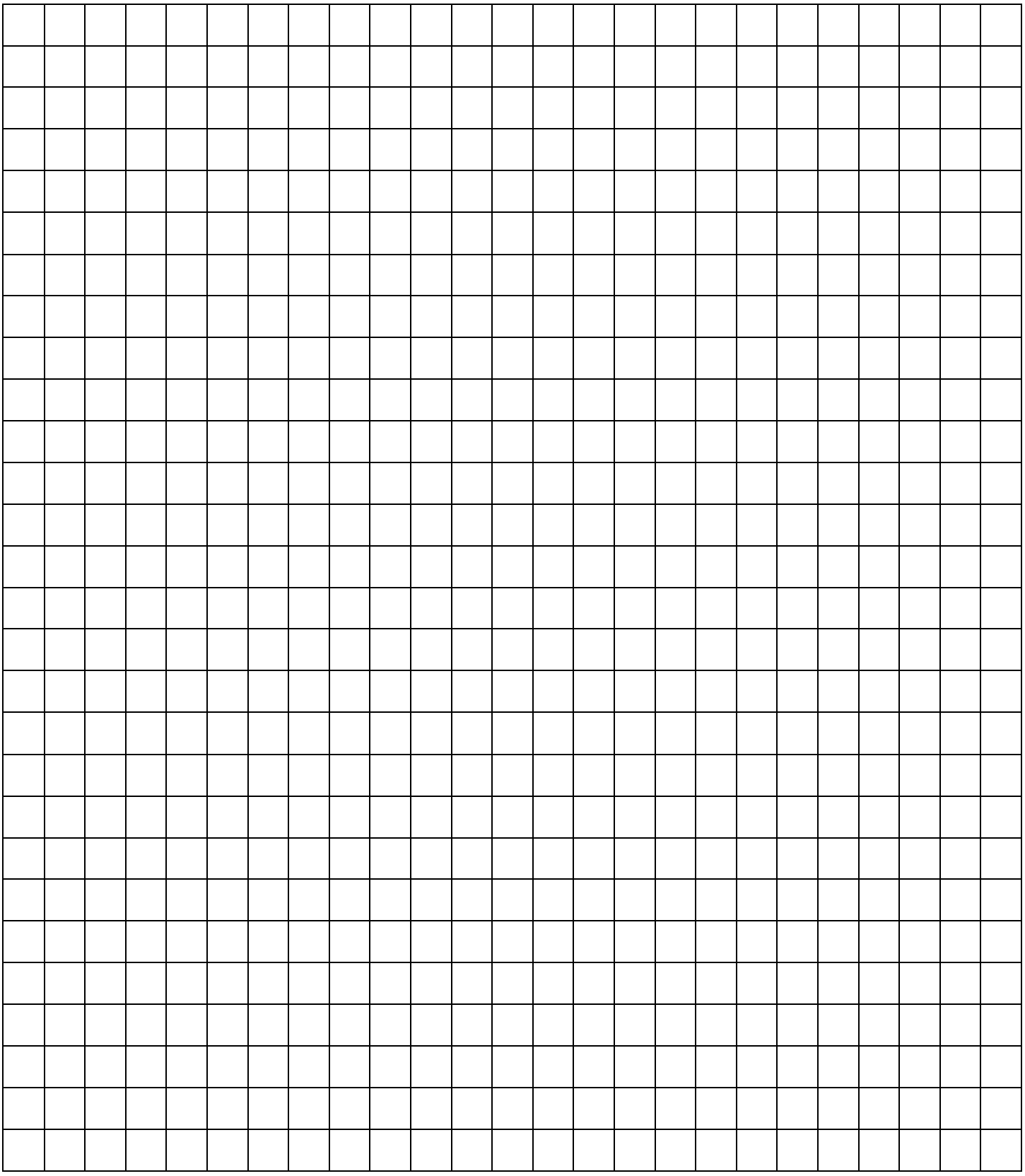


Unit 6, Activities 2, 3, 7, and 14, Grid Paper

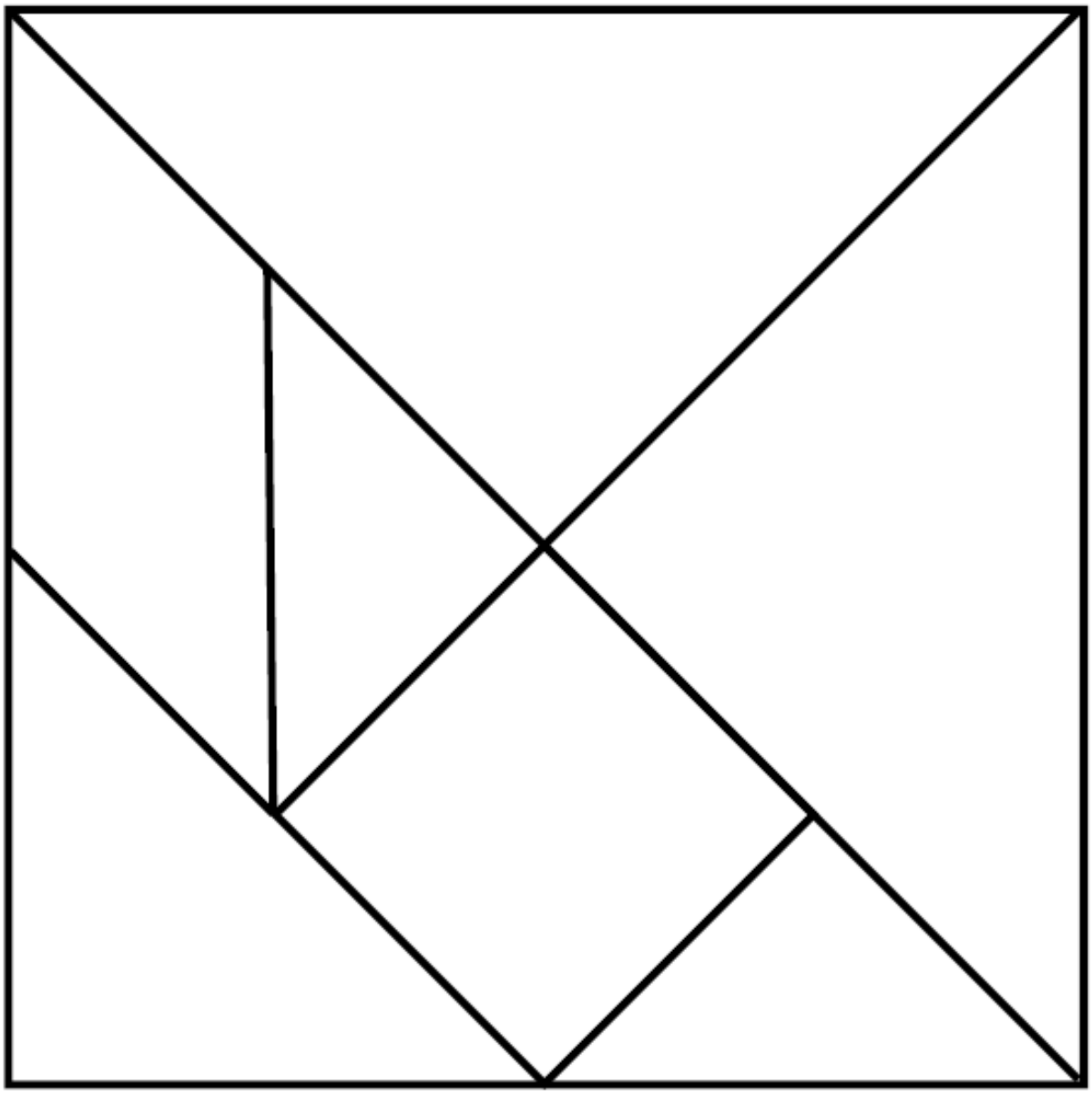


Name _____ Date _____

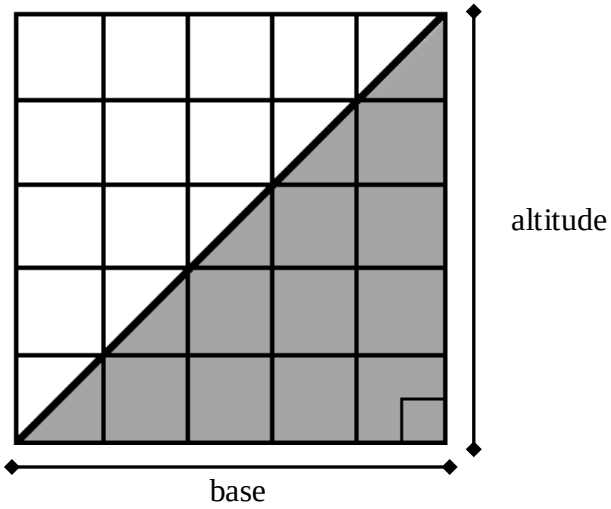
Dimensions of the Square (units)	**Number Squared**	**Area (square units)**

Name _____ Date _____

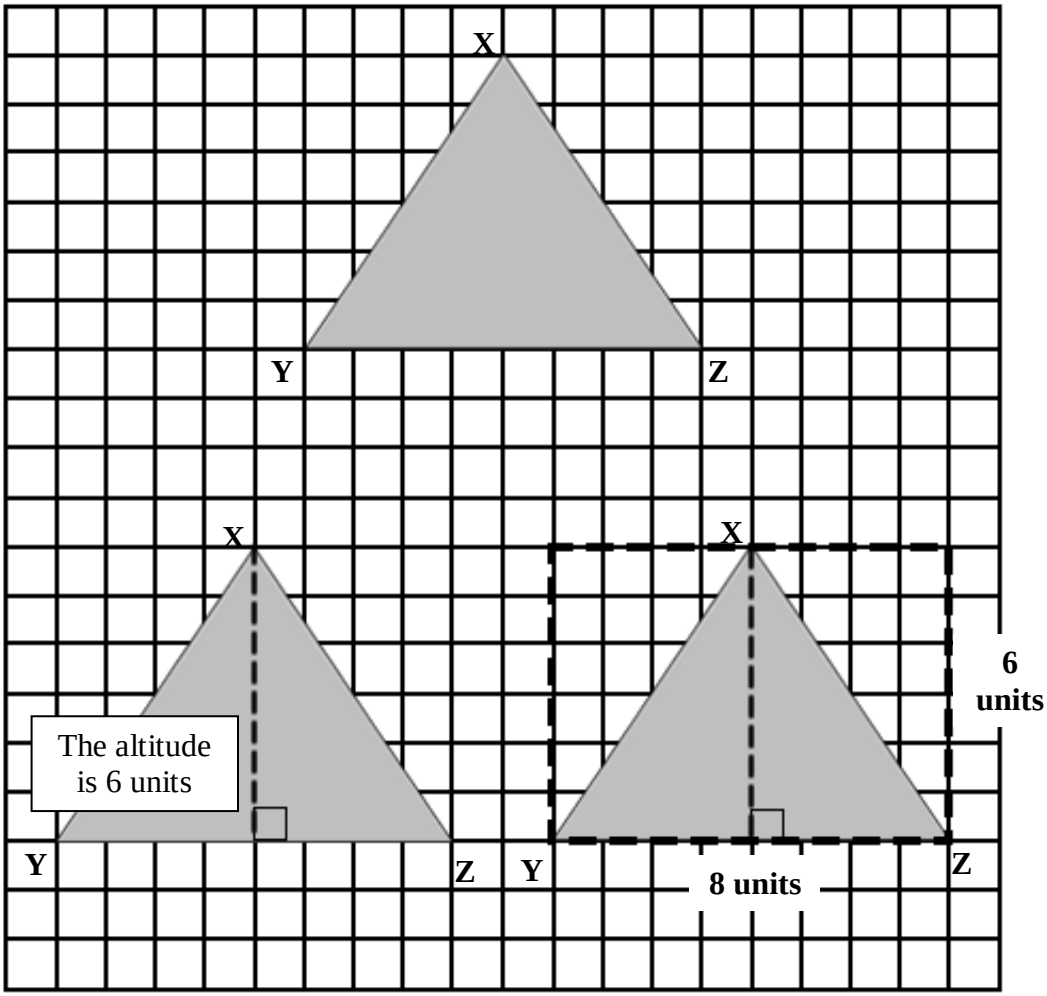
Dimensions of the Square (units)	**Number Squared**	**Area (square units)**
1×1	1^2	1
2×2	2^2	4
3×3	3^2	9
4×4	4^2	16
5×5	5^2	25
6×6	6^2	36
7×7	7^2	49
8×8	8^2	64
9×9	9^2	81
10×10	10^2	100
11×11	11^2	121
12×12	12^2	144



Part A


altitude
base

Part B

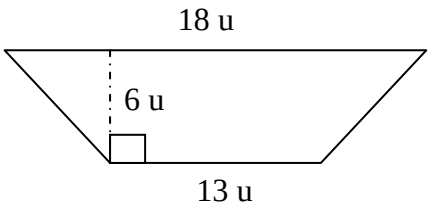

X
Y
Z
X
The altitude is 6 units
Y
Z
X
Y
Z
6 units
8 units

Name _____ Date _____

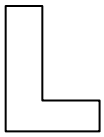
Solve the following problems.

1. Find the area of a triangle with a base length of five units and a height of six units.

2. Find the area of the trapezoid shown below by decomposing it into a rectangle and triangles.



3. The sixth grade class at Louisiana Middle School is building a giant wooden L for their school. The L will be 12 feet tall and 8 feet wide and the thickness of the block letter will be 2.5 feet. What is the area of the L?



Unit 6, Activity 5, Area with Answers

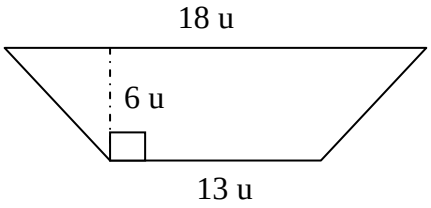
Name _____ Date _____

Solve the following problems.

1. Find the area of a triangle with a base length of five units and a height of six units.

A = ½ (b × h)
A = ½ (5 × 6)
A = 15 square units

2. Find the area of the trapezoid shown below by decomposing it into a rectangle and triangles.

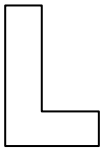


Area of 1 Triangle
Base = 2.5 u
Height = 6 u
½ (2.5 × 6)
7.5 sq. units

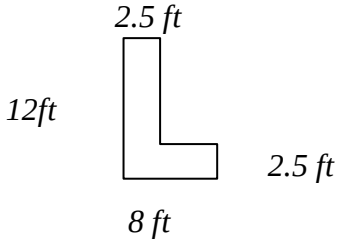
Rectangle
Length = 13 u
Width = 6 u
13 × 6
78 sq. units

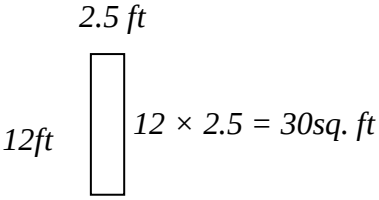
7. 5 + 7.5 + 78 = 93 sq. units

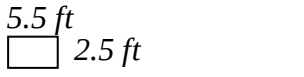
3. The sixth grade class at Louisiana Middle School is building a giant wooden L for their school. The L will be 12 feet tall and 8 feet wide and the thickness of the block letter will be 2.5 feet. What is the area of the L?



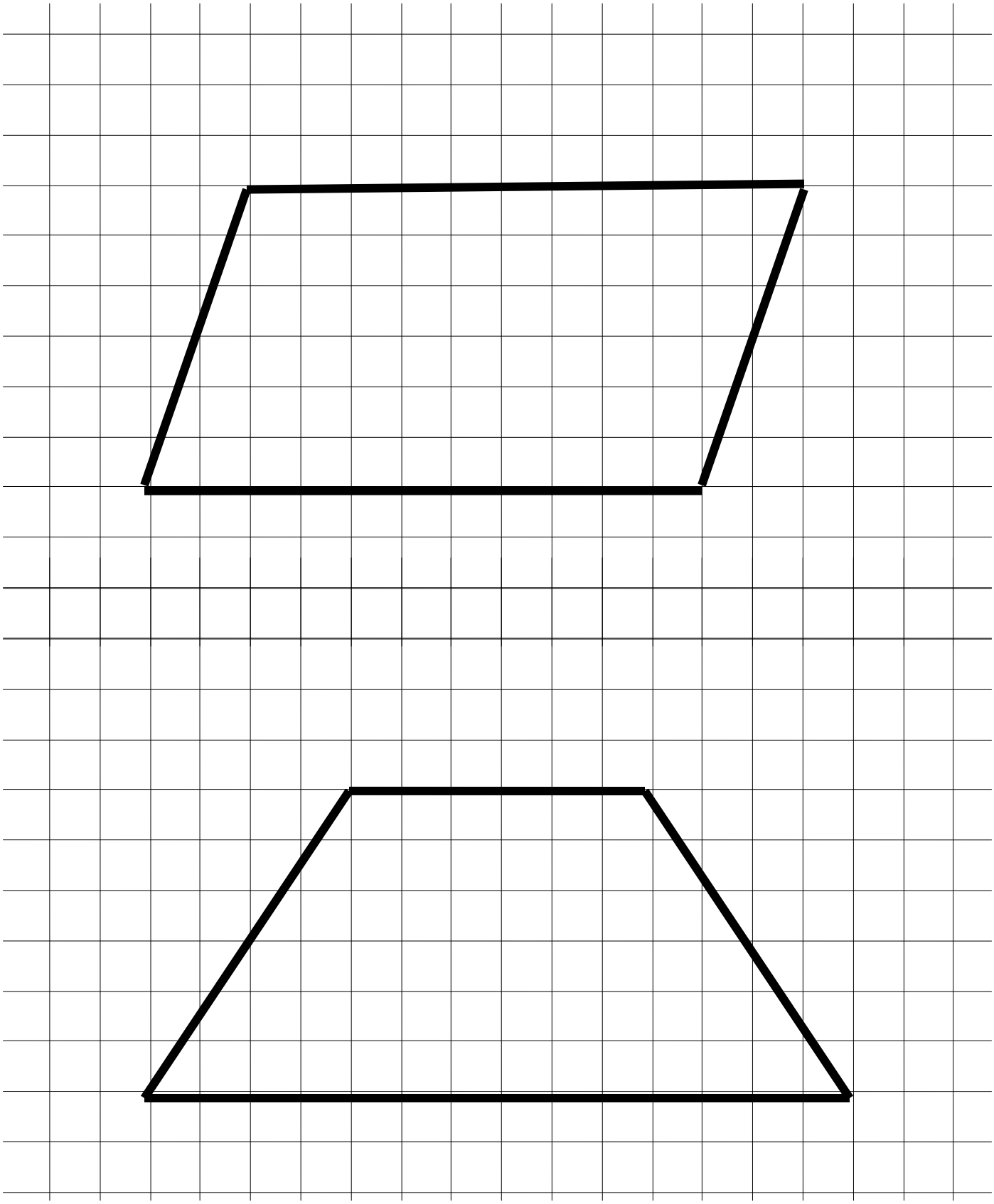
One possible way to find the area







30 + 13.75 = 43.75 sq. ft



integrated **iLEAP** **Mathematics Reference Sheet—Grade 6**

Use the information below to answer questions on the Math test.

U.S. Unit Conversions
1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet

Metric Unit Conversions
1 meter = 1,000 millimeters
1 meter = 100 centimeters
1 kilometer = 1,000 meters

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

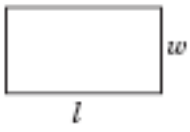
1 liter = 1,000 milliliters

1 kilogram = 1,000 grams

1 pound = 16 ounces
1 ton = 2,000 pounds

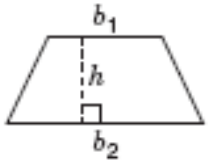
Distance Formula:
distance = rate • time

Rectangle



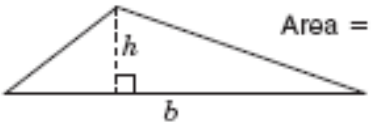
Area = $l \cdot w$
Perimeter = $2 \cdot (l + w)$

Trapezoid



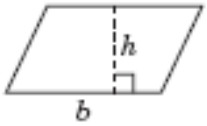
Area = $\frac{1}{2} \cdot h \cdot (b_1 + b_2)$

Triangle



Area = $\frac{1}{2} \cdot b \cdot h$

Parallelogram



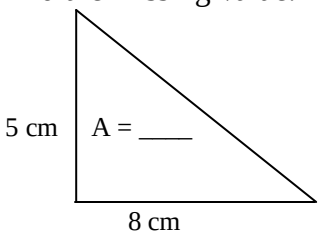
Area = $b \cdot h$

Mean:	In a collection of data, the sum of all the data divided by the number of data
Median:	The middle number or average of the two middle numbers in a collection of data when the data are arranged in order
Mode:	The number or numbers that occur most often in a collection of data
Range:	The difference between the greatest and the least numbers in a collection of data

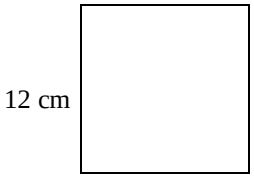
Name _____ Date _____

Use the formulas on the iLEAP Reference sheet to solve the following problems.

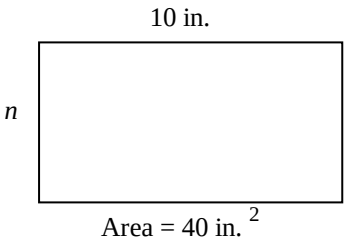
1. Find the missing value.



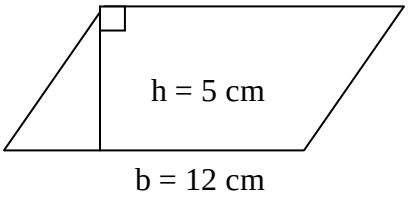
2. Find the perimeter and area of the following square.



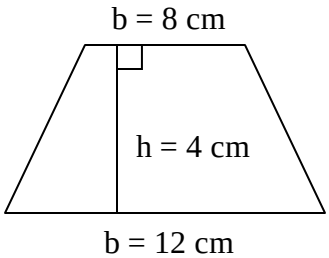
3. Find the value of *n* in the rectangle.



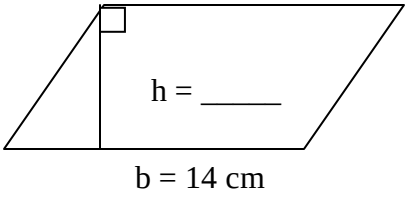
4. Find the area of the parallelogram.



5. Find the area of the trapezoid.



6. Find the height of the parallelogram.



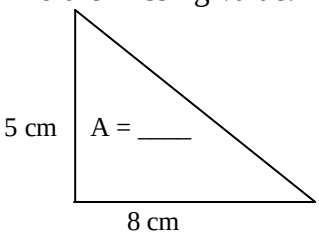
Area = 98 cm

Unit 6, Activity 6, Area and Perimeter with Answers

Name _____ Date _____

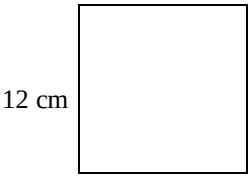
Use the formulas on the iLEAP Reference sheet to solve the following problems.

1. Find the missing value.



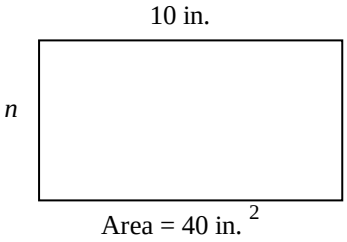
Area = 20 cm²

2. Find the perimeter and area of the following square.



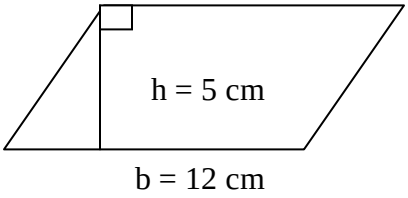
Area = 144 cm² *Perimeter = 48 cm*

3. Find the value of *n* in the rectangle.



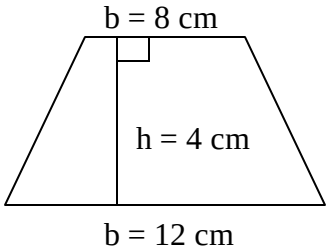
n = 4 in.

4. Find the area of the parallelogram.



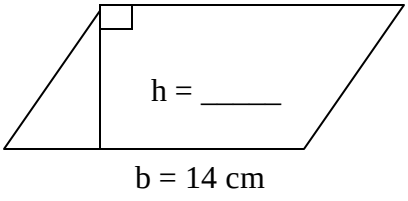
Area = 60 cm²

5. Find the area of the trapezoid.



Area = 40 cm²

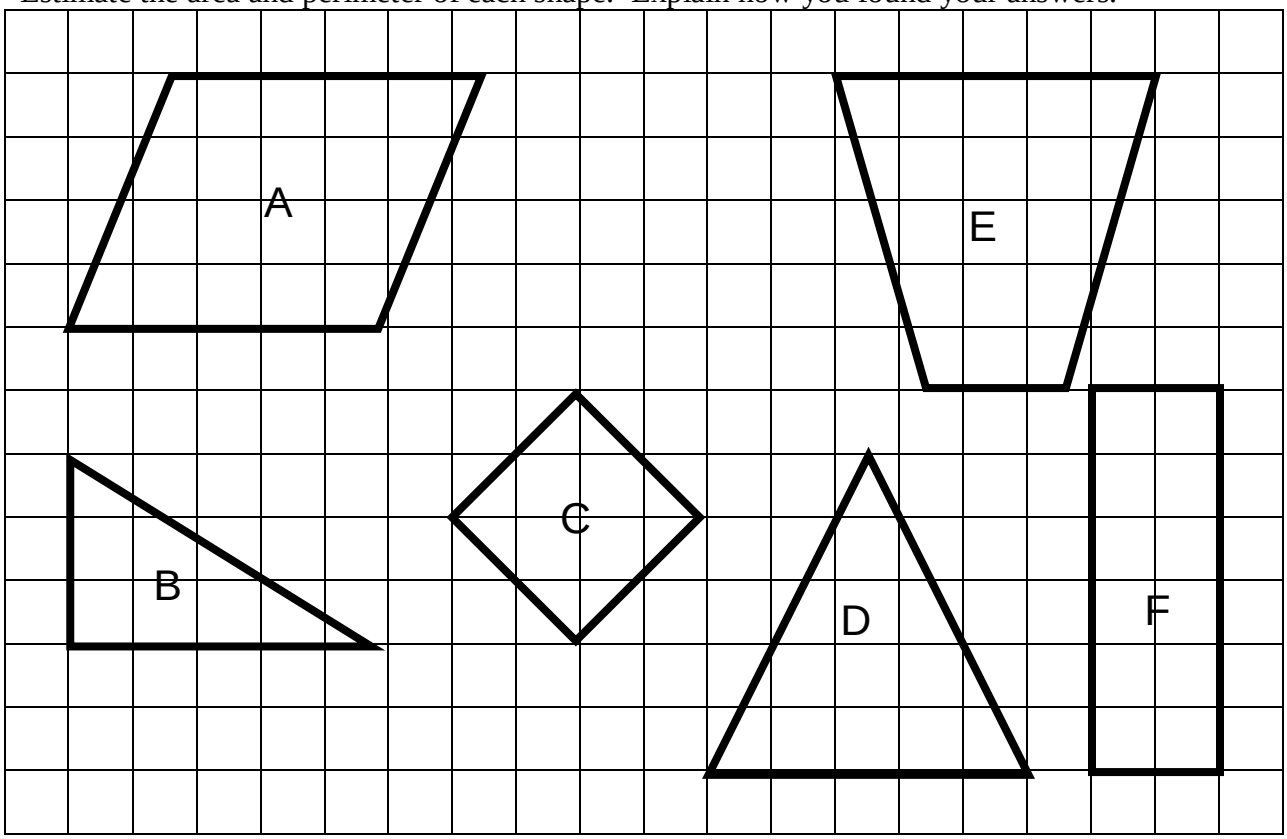
6. Find the height of the parallelogram.



Area = 98 cm

h = 7 cm

Estimate the area and perimeter of each shape. Explain how you found your answers.



A. area = _____ perimeter = _____

B. area = _____ perimeter = _____

C. area = _____ perimeter = _____

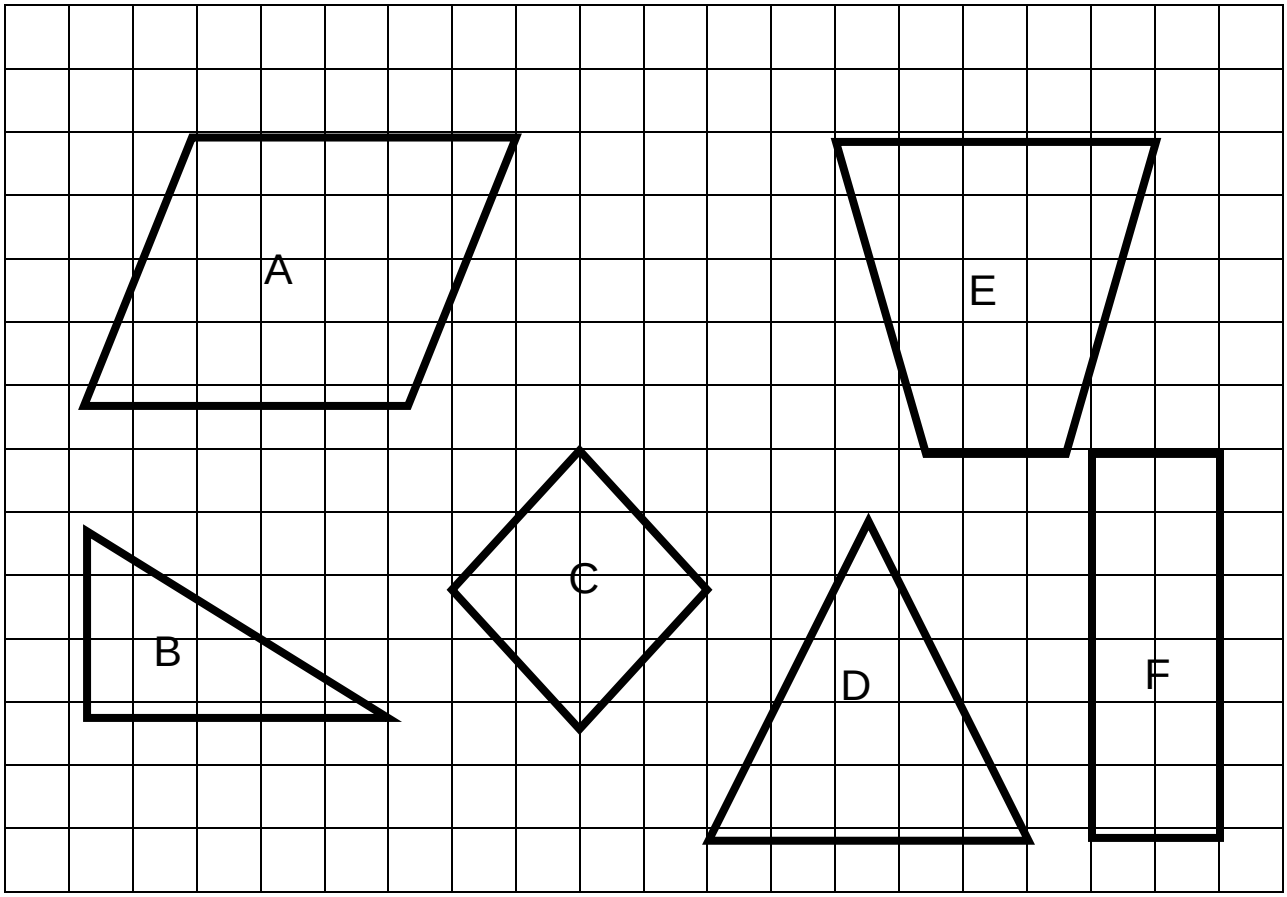
D. area = _____ perimeter = _____

E. area = _____ perimeter = _____

F. area = _____ perimeter = _____

Unit 6, Activity 7, 2-D Shapes with Answers

Estimate the area and perimeter of each shape. Explain how you found your answers.



A. area = *≈ 21 units²* perimeter = *≈ 20 units*

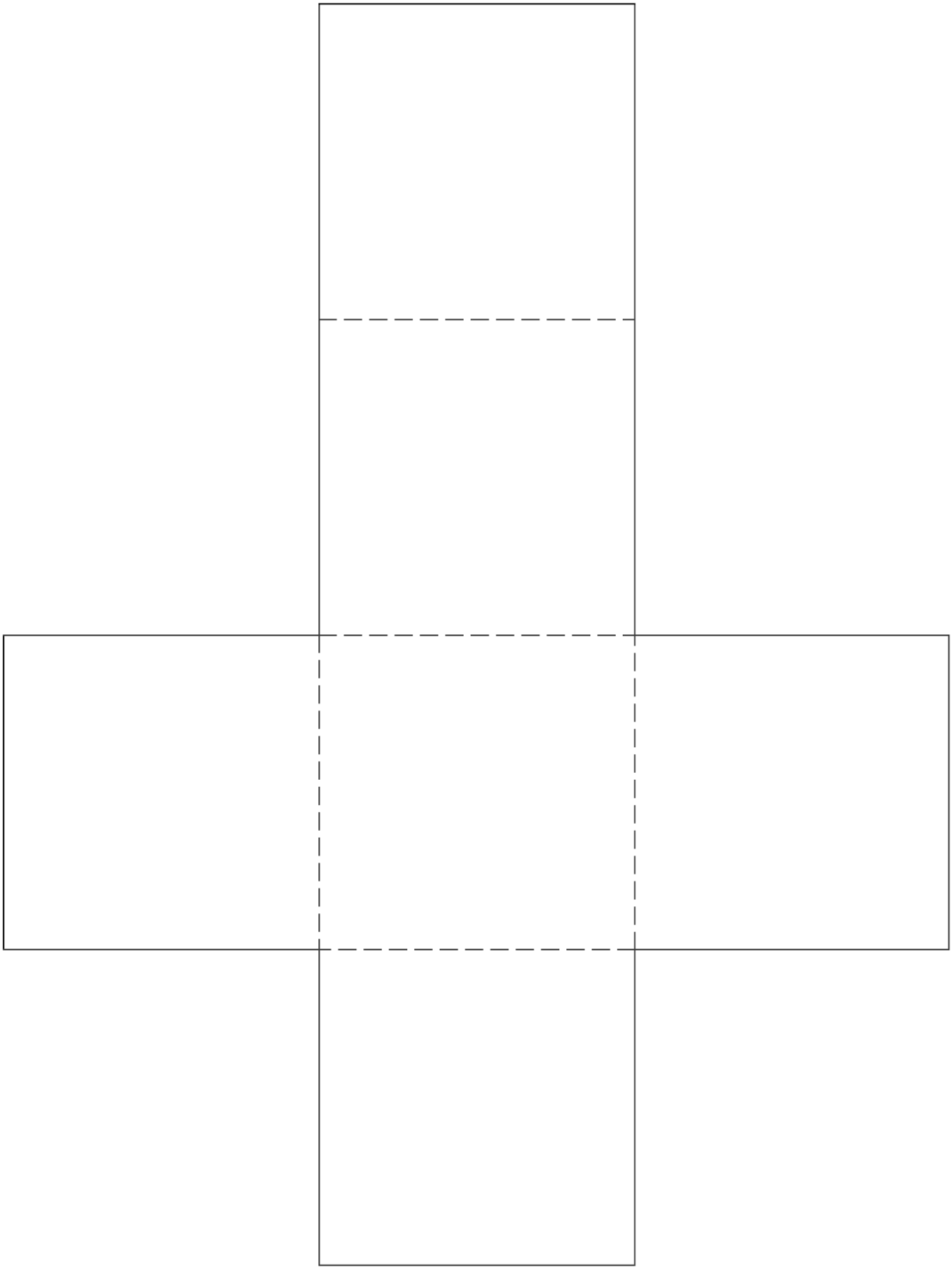
B. area = *≈ 7 units²* perimeter = *≈ 13 units*

C. area = *≈ 9 units²* perimeter = *≈ 12 units*

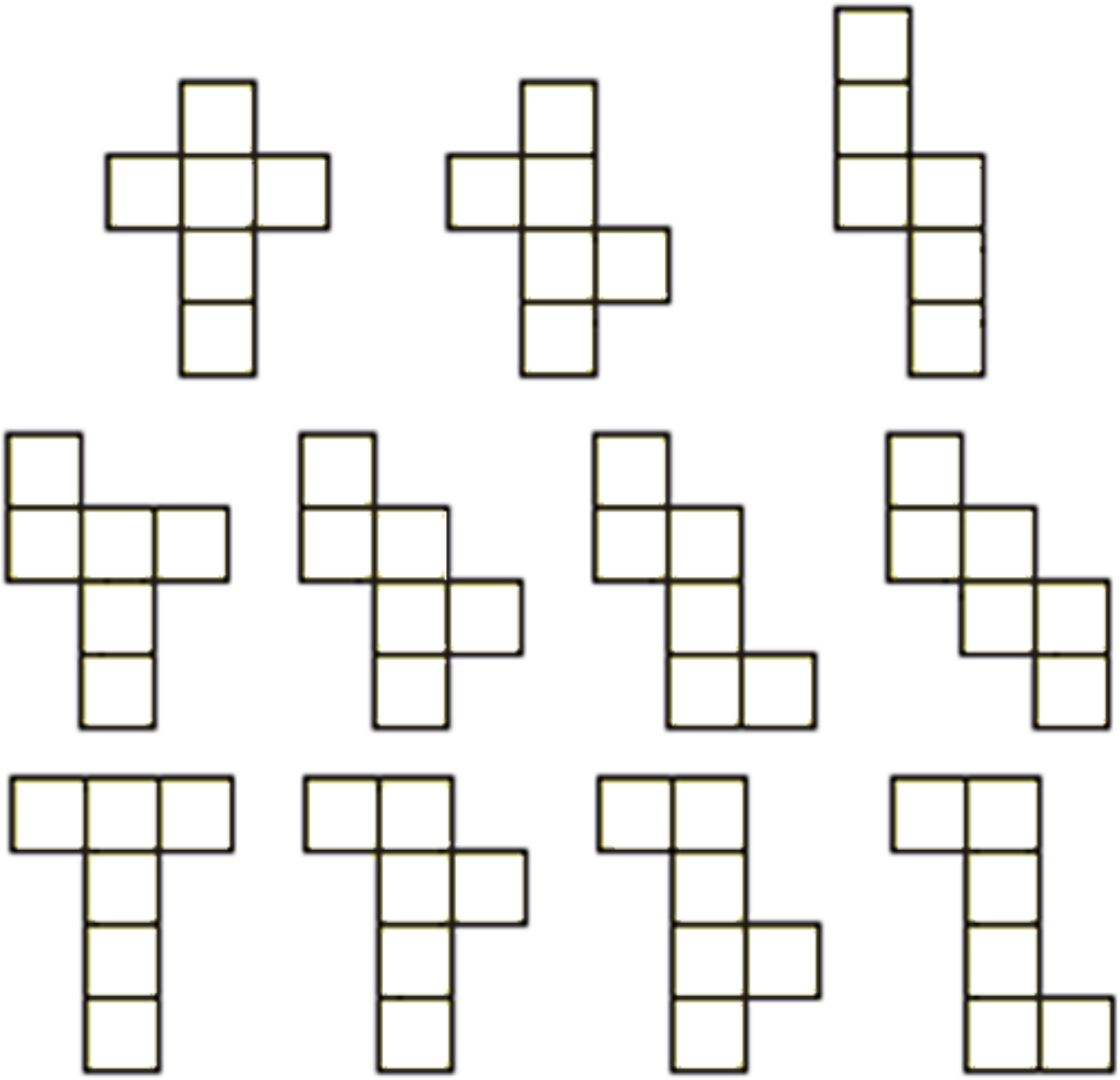
D. area = *≈ 13 units²* perimeter = *≈ 16 units*

E. area = *≈ 18 units²* perimeter = *≈ 17 units*

F. area = *≈ 12 units²* perimeter = *≈ 16 units*



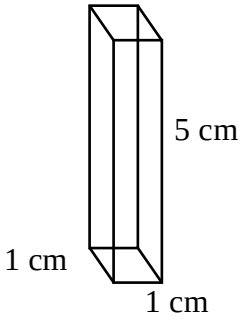
Unit 6, Activities 10 and 11, 1 Inch Grid Paper



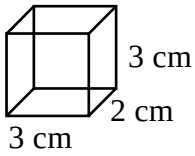
Name _____ Date _____

Draw the net and label the dimensions. Find the surface area.

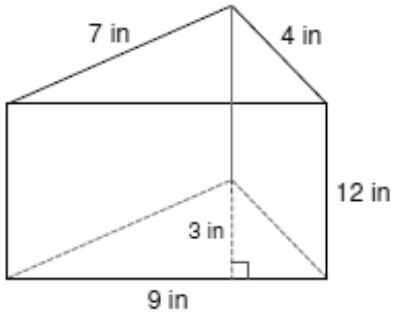
1.



2.



3.

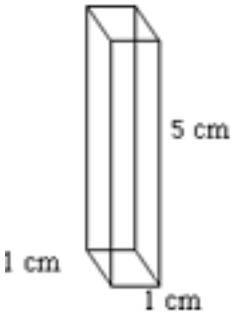


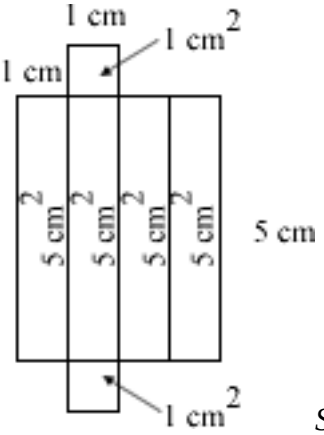
Unit 6, Activity 11, Surface Area with Answers

Name _____ Date _____

Draw the net and label the dimensions. Find the surface area.

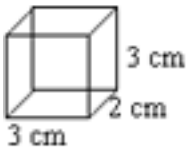
1.

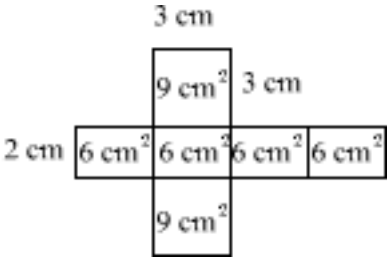




SA = 1 + 1 + 5 + 5 + 5 + 5 = 22 cm²

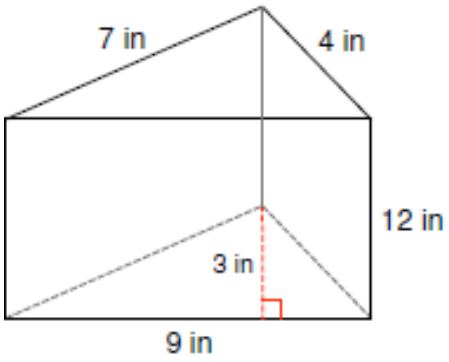
2.

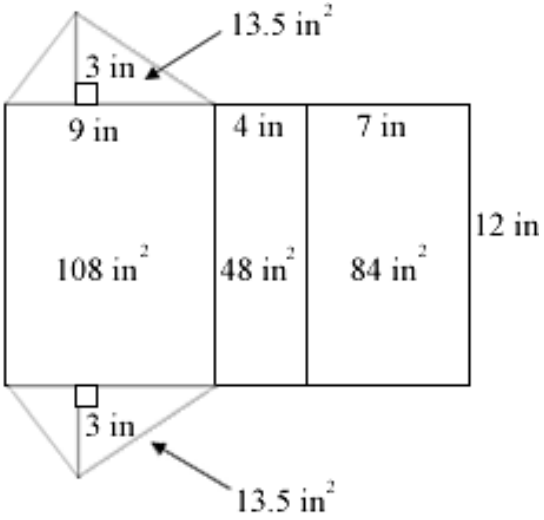




SA = 9 + 9 + 6 + 6 + 6 + 6 = 42 cm²

3.





SA = 13.5 + 13.5 + 108 + 48 + 84 = 267 in²

Figure 1:

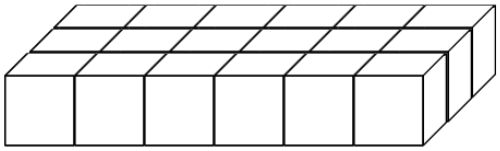


Figure 2:

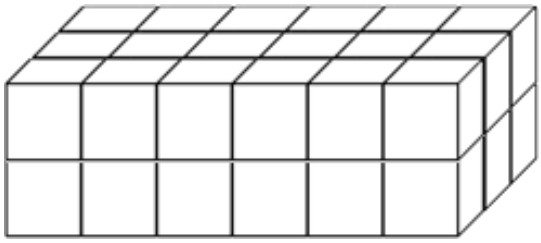
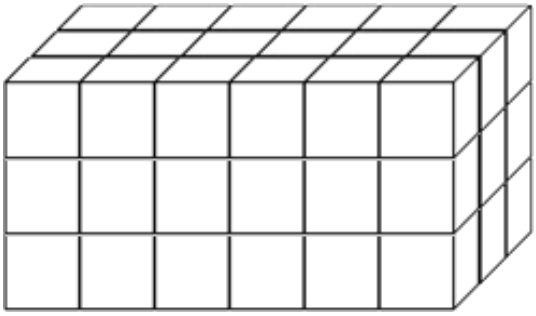


Figure 3:



Name _____ Date _____

Solve the following problems.

Given the following dimensions, find the volume of each rectangular prism.

1. l = 4 ft w = 2 ft h = 4 ½ ft

2. l = 2 cm w = 6 cm h = 7.5 cm

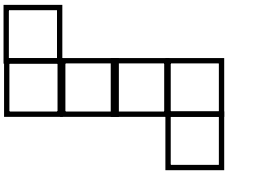
3. l = 9 in w = 10 ½ in h = 4 in

4. l = 4 ½ m w = 4.5 m h = 4.5 m

5. l = 1½ ft w = 2.5 ft h = 6.5 ft

6. A sand box is 5 ft. long 4¾ ft. wide and 1½ ft. deep. How many cubic feet of sand can it hold?

7. Find the volume.



5.5 cm

Unit 6, Activity 13, Volume with Answers

Name _____ Date _____

Solve the following problems.

Given the following dimensions, find the volume of each rectangular prism.

1. l = 4 ft w = 2 ft h = 4 ½ ft *36 ft³*

2. l = 2 cm w = 6 cm h = 7.5 cm *90 cm³*

3. l = 9 in w = 10 ½ in h = 4 in *378 in³*

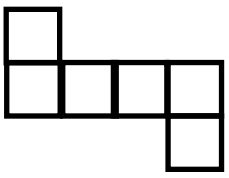
4. l = 4 ½ m w = 4.5 m h = 4.5 m *91.125 m³ or* $91\frac{1}{8}$ *m³*

5. l = 1½ ft w = 2.5 ft h = 6.5 ft *24.375 ft³ or* $24\ \frac{3}{8}$ *ft³*

6. A sand box is 5 ft. long 4¾ ft. wide and 1½ ft. deep. How many cubic feet of sand can it hold?

   35.625 ft³ or $35\frac{5}{8}$ *ft³*

7. Find the volume.



5.5 cm

5.5 × 5.5 × 5.5 = *166.375 cm³ or* $166\ \frac{3}{8}$ *cm³*