

# Unit 7 Math Review – Practice Problems

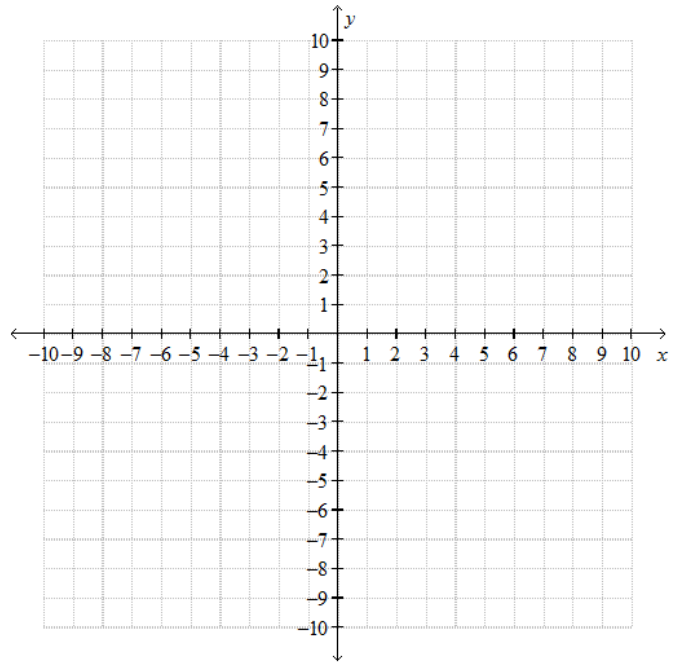
Student Name \_\_\_\_\_

I studied this for more than 20 minutes (parent signature) \_\_\_\_\_

1. The vertices of polygon ABCD are located at A (-3, 6), B(4, 6), C(2, -1), and D(-1, -3)

A. Draw polygon ABCD in the coordinate plane.

B. Find the length of side AB



2. What is the volume of this box of cereal? <sup>2</sup>

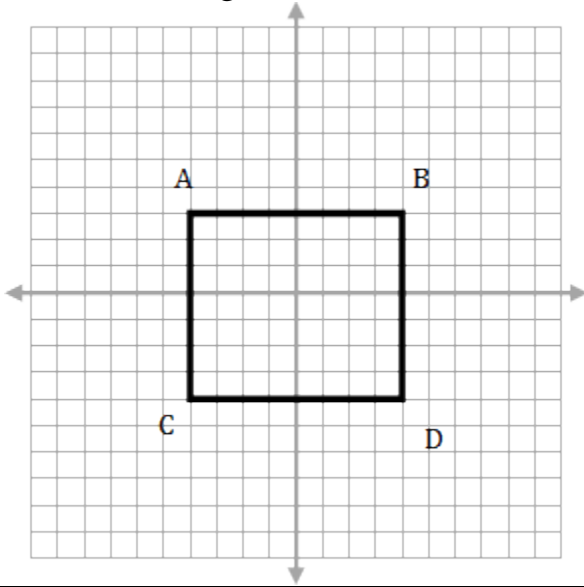


3. A regular pentagon has a side length of 4 centimeters. When decomposed into five congruent triangles, the height of each triangle is 10 centimeters.

Draw the pentagon and label it.

Find the area of this regular pentagon?

4. Find the length of side AB

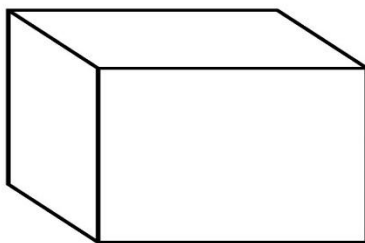


5. A box of cereal has a volume of 360 cubic inches. The dimensions are 5 inches by 12 inches by x inches.

What is the length of the missing dimension?

6. A  $\frac{1}{4}$ -inch cube is shown on the left and a box is shown on the right.

$\frac{1}{4}$  inch sides



The larger box has the dimensions:  $\frac{3}{4}$  inch,  $1 \frac{1}{4}$  inch,  $\frac{1}{2}$  inch

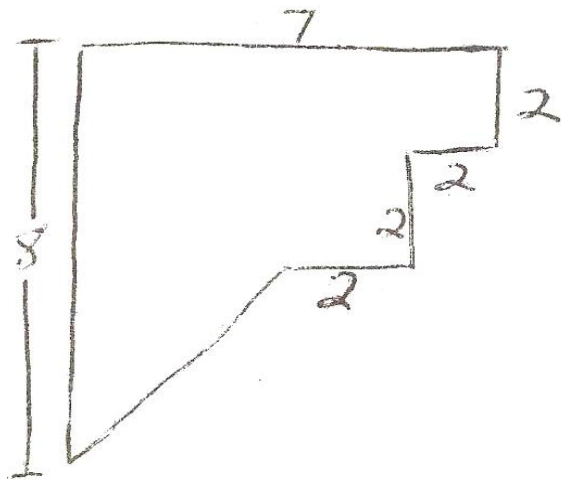
How many  $\frac{1}{4}$ -inch cubes are needed to fill the entire box?

7. Justin's garden is 12 feet by 5 feet. Within the garden, a 2-foot by 3-foot rectangular area is dedicated to strawberries. The rest of the garden is planted with vegetables.

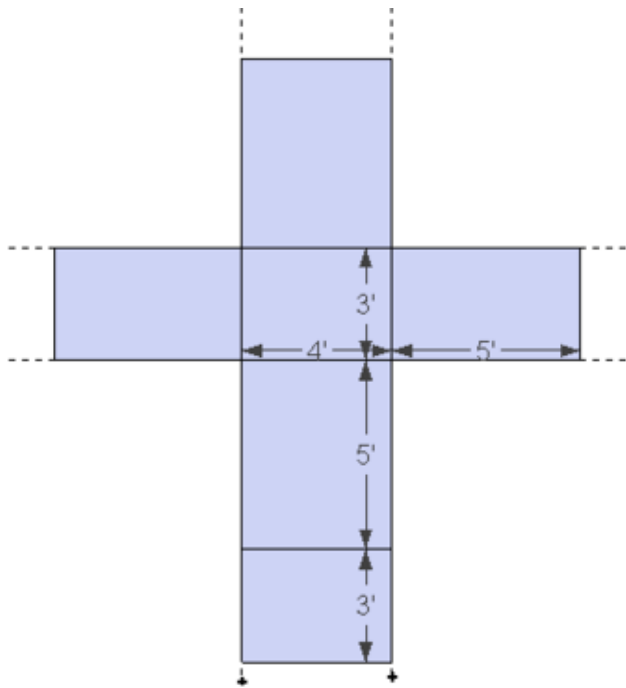
Draw a diagram.

How much of the garden is for growing vegetables?

8. Find the area of the shape



9. Find surface area of net

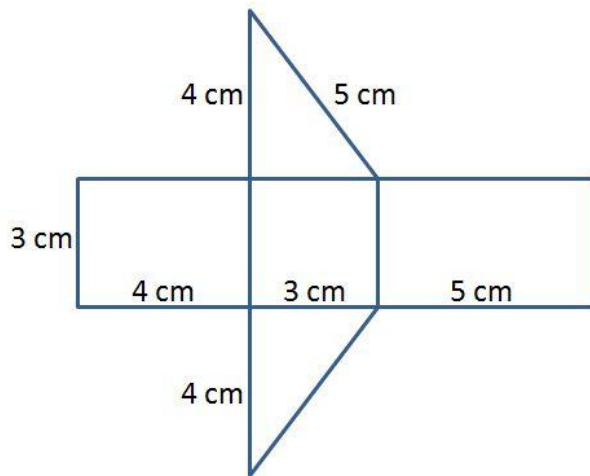


10. Find the surface area of a right rectangular prism with the dimensions 3 feet by 5 feet by 4 feet.

Draw it.

Solve it.

11. What is the surface area of this triangular prism?



12. The vertices of polygon ABCD are

A (2, 3)

B (2, 5)

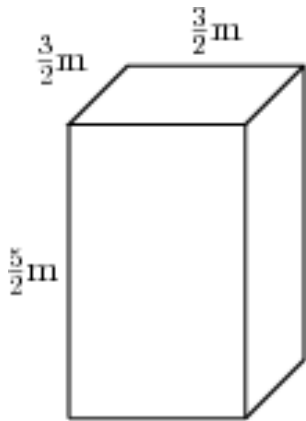
C (3, 7)

D (6, 3)

Graph polygon ABCD.

Find the length of side AB and the length of side AD

13. What is the volume of the container?



14. A triangle is drawn in the coordinate plane with the coordinates shown.

A (-5, 6)

B (2, 6)

C (-5, 7)

Graph it.

What is the length of side AB ?

15. Ben needs to wrap a gift box that is 14 inches long, 4 inches wide, and 2 inches high. Which type of measure will tell him how much paper he needs to cover the box?

length, perimeter, surface area or volume?

Explain why your answer is correct.

16. Mr. Yoder has 32 feet of fence to build a rectangular pen. If the pen is going to be 5 feet long, how wide should it be?

Draw a diagram to show your answer is correct.

<p>17. The coordinates of opposite vertices of a rectangle are <math>(-6, 2)</math> and <math>(8, -5)</math>.</p> <p>What are the coordinates for the remaining two vertices?</p> <p>Draw it to show your answer is correct.</p>	
<p>18. What is the area of a photograph that has a width of <math>5\frac{1}{2}</math> inches and a length of 8 inches?</p>	
<p>19. Joshua cut a piece of wood in the shape of a right triangle. The base of the wood is 8 inches long and the area of the piece of wood is 40 square inches. What is the height of the piece of wood?</p>	
<p>20. Which measurements describe a triangle with an area of 24 square centimeters?</p> <p>a) Triangle A has a height of 4 cm and a base of 6 cm</p> <p>b) Triangle B has a height of 4 cm and a base of 3 cm</p> <p>c) Triangle C has a height of 8 cm and a base of 3 cm</p> <p>d) Triangle D has a height of 4 cm and a base of 20 cm</p> <p>Prove your answer is correct.</p>	