

Name

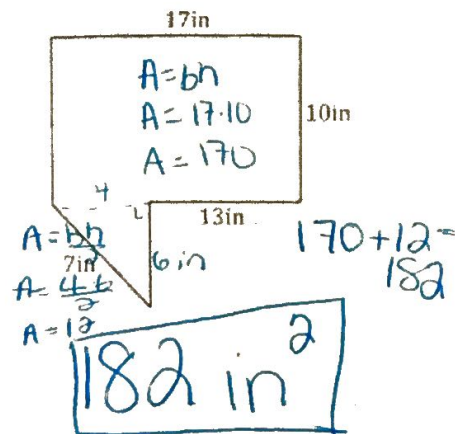
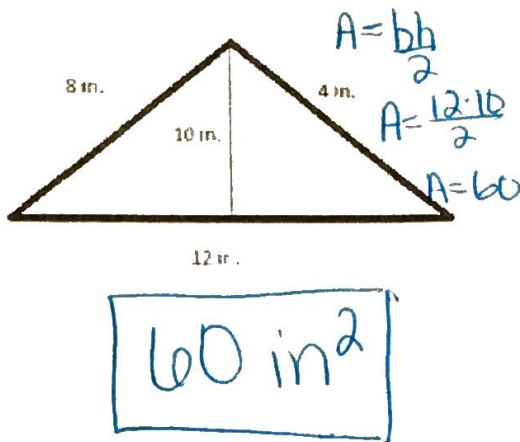
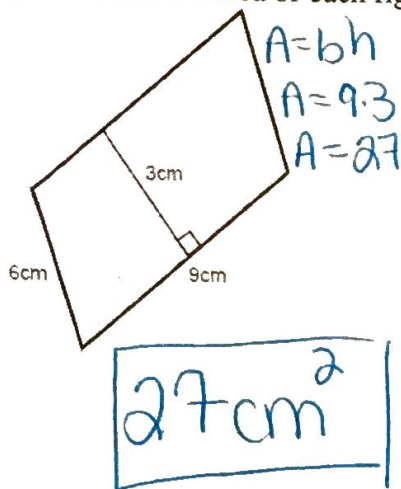
Key

Date

Accelerated 6th Grade Math – Assessment 8 Review Guide

6.G.1 Finding Area

1. Find the area of each figure. Show your work and round your answer to the nearest tenth.



2. A rectangular playground is being covered with asphalt. There is a rectangular sandbox on the playground. The playground measures 89 feet by 75 feet. The sandbox measures 5 feet by 11 feet. How much of the playground will be covered by asphalt? Show your work.

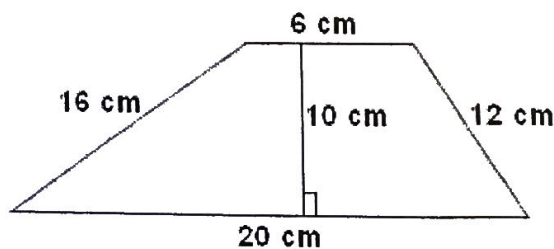
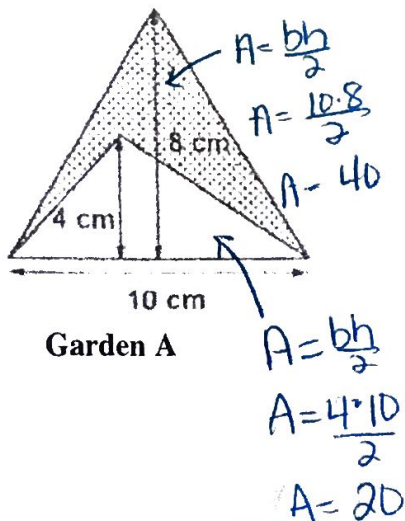
Playground: $A = bh$
 $A = 89 \cdot 75$
 $A = 6675$

Sandbox: $A = bh$
 $A = 5 \cdot 11$
 $A = 55$

$$\begin{array}{r} 6675 \\ - 55 \\ \hline 6620 \end{array}$$

6620 ft^2

3. The diagrams below show the layouts of two different designs for Sally's backyard garden. Find the area of each of the gardens. Show your work.



6.G.2 Finding Volume

4. Use the figure to the right to answer questions a-c.

a. How many cubes were used to build the prism?

40

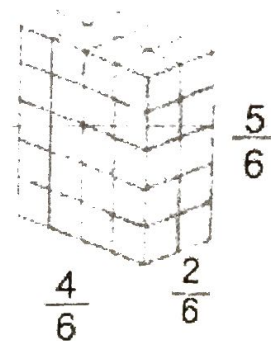
b. What is the side length of each cube?

$\frac{1}{6}$ unit

c. What is the volume of the prism?

$$V = lwh$$

$$V = \frac{4}{6} \cdot \frac{2}{6} \cdot \frac{5}{6} = \frac{40}{216} \text{ or } \frac{5}{27} \text{ unit}^3$$



5. Casey is trying to find a warehouse to store her instruments, but she needs the most room possible. Find the area of each warehouse to determine which one has a greater volume.

Warehouse 1

Length: 48 ft

Width: 62 ft

Height: 9 ft

$$V = lwh$$

$$V = 48 \cdot 62 \cdot 9$$

$V = 26,784 \text{ ft}^3$

Warehouse 2

Area of Base: 3000 ft²

Height: 8 ft

$$V = Bh$$

$$V = 3000 \cdot 8$$

$V = 24,000 \text{ ft}^3$

Which warehouse has a larger volume?

1

6.G.3 Area on a Coordinate Plane

Use the coordinate plane on the right to complete the following questions.

6. Plot and label the following points:

Q (3, 1), R (-2, 1), S (-2, -4), and T (3, -4).

7. Find the distance between Q and R.

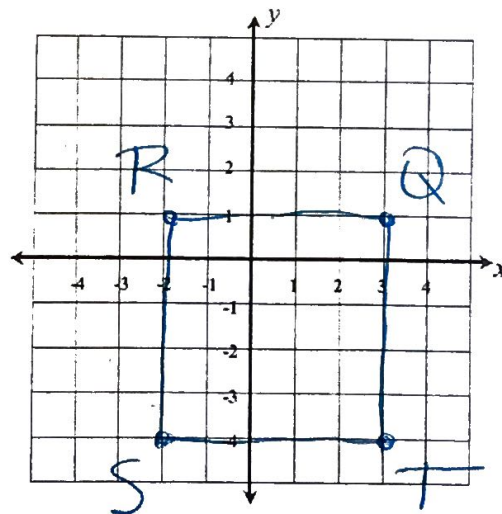
5 units

8. Find the distance between S and T.

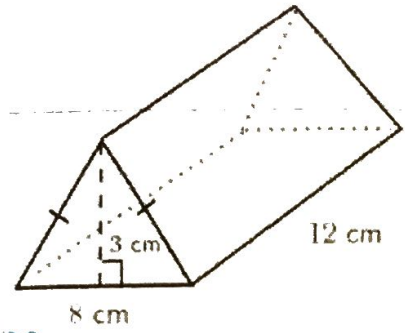
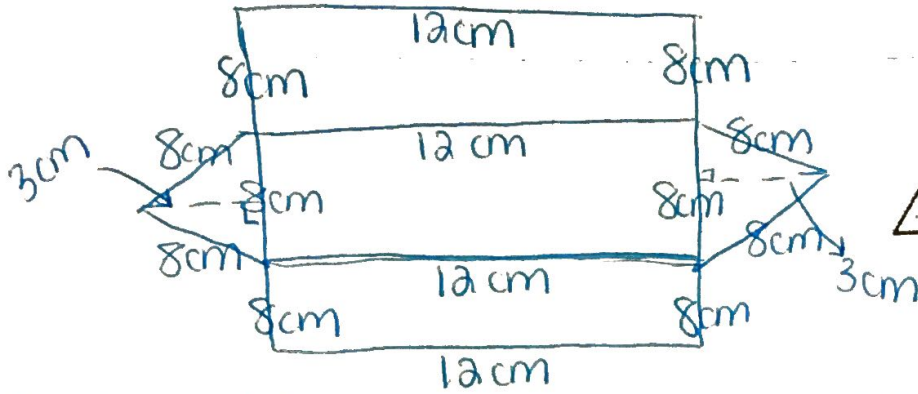
5 units

9. Find the area of rectangle QRST.

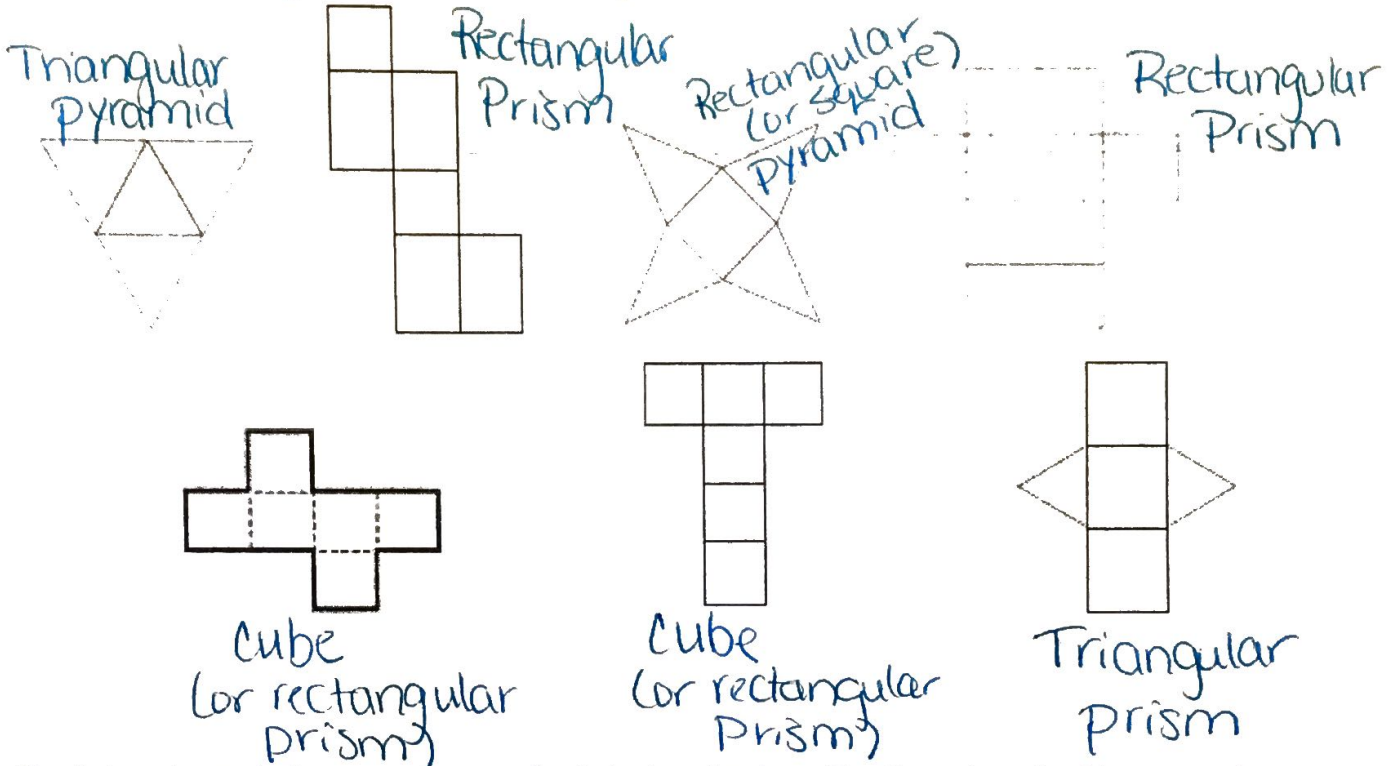
25 units²



10. Create and label a net for the equilateral triangular prism.



11. Name the geometric figure each net will make if you fold on the solid lines:

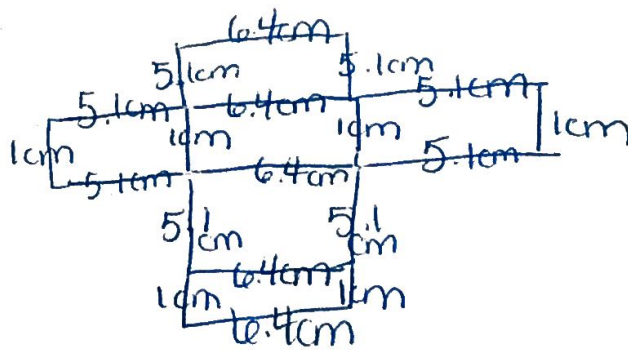


12. Nestle is trying to design a new wrapper for their chocolate bar. The dimensions for this rectangular prism-shaped candy bar are listed below. Sketch and label a net of the bar.

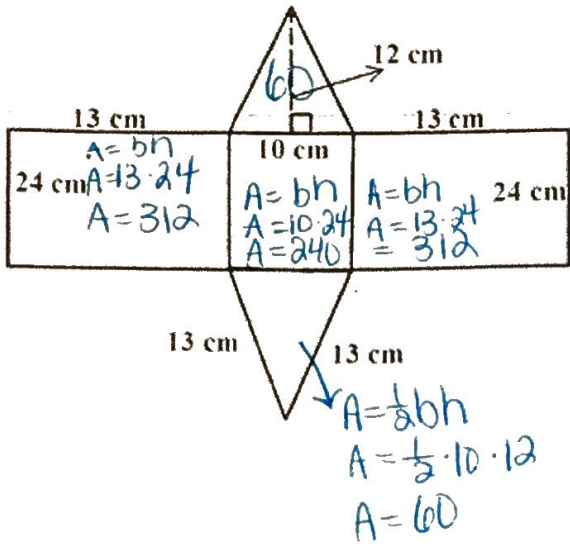
Length: 6.4 cm

Width: 5.1 cm

Height: 1 cm

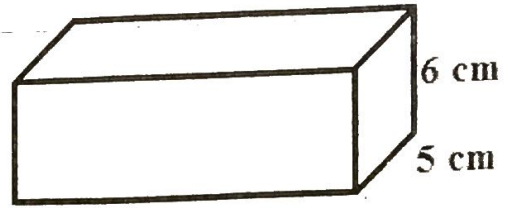


13. Calculate the surface area of each 3-D figure below. Show your work.



$$SA = 312 + 312 + 240 + 60 + 60$$

$$SA = 984 \text{ cm}^2$$



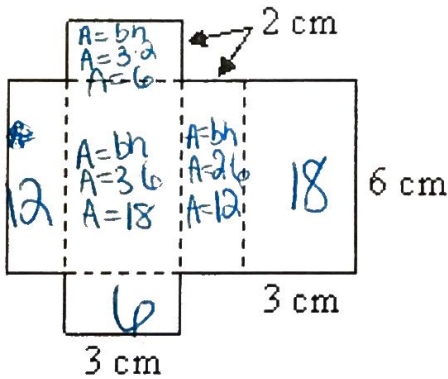
11 cm

$$SA = 2lw + 2lh + 2wh$$

$$SA = 2 \cdot 11 \cdot 5 + 2 \cdot 11 \cdot 6 + 2 \cdot 5 \cdot 6$$

$$SA = 110 + 132 + 60$$

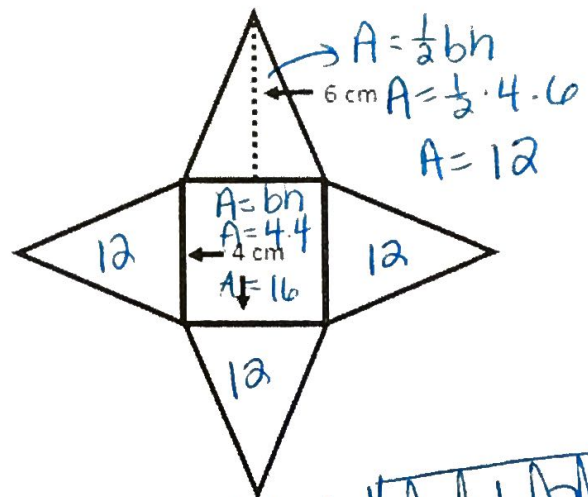
$$SA = 302 \text{ cm}^2$$



$$SA = 72 + 216 + 216$$

$$SA = 504$$

$$SA = 72 \text{ cm}^2$$



~~$$SA = 16 + 4(12) = 64 \text{ cm}^2$$~~

$$SA = 16 + 4(12) = 64 \text{ cm}^2$$