

# Math 6 - Unit 5: Area & Volume

## End of Unit Test Study Guide

Name: KEY

Class Period: 1 2 3 4 Date: \_\_\_\_\_

1) How could you determine the surface area of a triangular prism? **MAKE A NET**



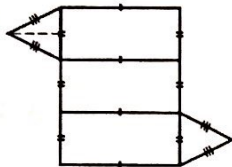
**FIND AREA OF EACH FACE  
ADD THE AREAS TOGETHER**

2) Is painting your house a real world example of surface area or volume?

**SURFACE AREA**

3) What shape is formed by folding the following nets?

**TRIANGULAR PRISM**



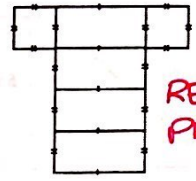
**SQUARE PYRAMID**



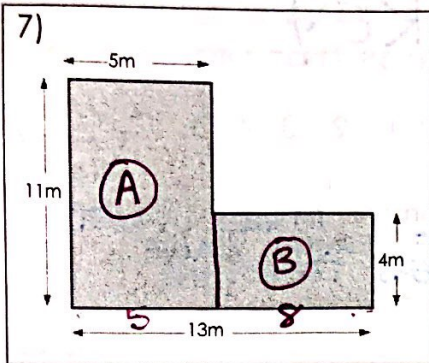
**CUBE**



**RECTANGULAR PRISM**



<p>4)</p>	$V = Bh$ $V = \frac{1}{6} \cdot \frac{1}{6} \cdot \frac{1}{6} = \frac{1}{216}$ $\frac{3}{36} = \frac{6}{216}$ <p>Volume of the Cube: <math>\frac{1}{216} \text{ in}^3</math></p>
<p>5) Find the area of the shaded region.</p>	$A = \frac{1}{2}bh$ $A = \frac{1}{2}(6)(6)$ $A = 18 \text{ units}^2$ $A = bh \quad A_A = \frac{1}{2}(6)(4)$ $A = 6 \cdot 6 \quad A_A = 12$ $A = 36 \quad A_B = \frac{1}{2}(6)(2)$ $A_B = 6 \quad A_{A+B} = 18$ <p>Area: <math>18 \text{ units}^2</math></p>
<p>6)</p>	$A = h \left( \frac{b_1 + b_2}{2} \right)$ $A = 3 \left( \frac{10 + 8}{2} \right)$ $A = 3 \left( \frac{18}{2} \right)$ $A = 27$ <p>Area: <math>27 \text{ cm}^2</math></p>



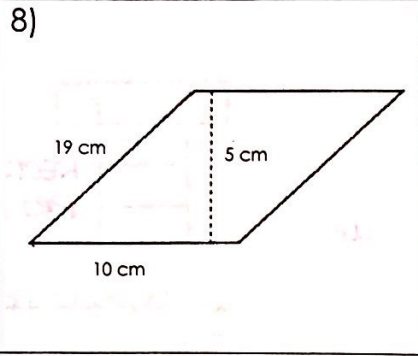
$$A_A = bh \quad A_B = bh$$

$$A_A = 5 \cdot 11 \quad A_B = 8 \cdot 4$$

$$A_A = 55m^2 \quad A_B = 32m^2$$

$$\begin{array}{r} 55 \\ + 32 \\ \hline 87 \end{array}$$

Area: 87m<sup>2</sup>



$$A = bh$$

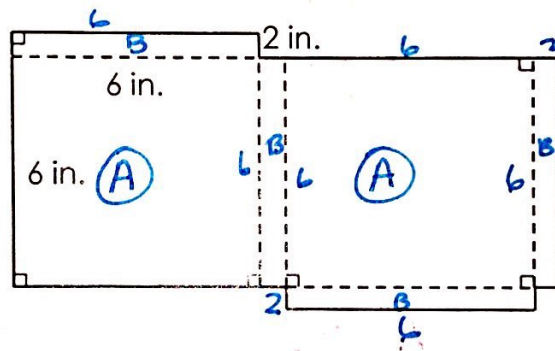
$$A = 10 \cdot 5$$

$$A = 50cm^2$$

Area: 50cm<sup>2</sup>

9) A box is covered with wrapping paper with no overlap. The net of the box is shown below.

How many square inches of wrapping paper is needed to cover the surface area of the box?



$$A_A = b \cdot h \quad A = 36$$

$$A_A = 6 \cdot 6 \quad A = 36$$

$$A_A = 36 \quad B = 12$$

$$A_B = bh \quad B = 12$$

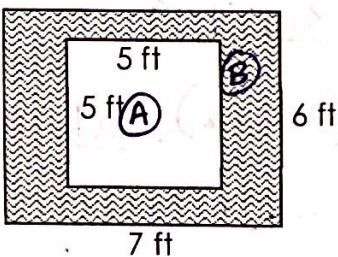
$$A_B = 6 \cdot 2 \quad B = 12$$

$$A_B = 12 \quad B = 12$$

$$\begin{array}{r} 72 \\ + 48 \\ \hline 120 \end{array}$$

Surface Area: 120in<sup>2</sup>

10) What is the area of the shaded frame?



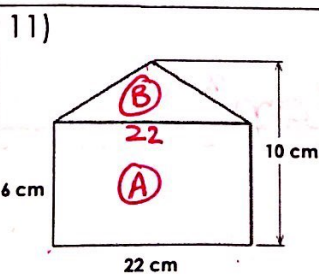
$$A_A = bh \quad A_B = bh$$

$$A_A = 5 \cdot 5 \quad A_B = 6 \cdot 7$$

$$A_A = 25ft^2 \quad A_B = 42ft^2$$

$$\begin{array}{r} 42 \\ - 25 \\ \hline 17 \end{array}$$

Area: 17ft<sup>2</sup>



$$A_A = bh \quad A_B = \frac{1}{2}bh$$

$$A_A = 22 \cdot 6 \quad A_B = \frac{1}{2}(22)(10)$$

$$A_A = 132cm^2 \quad A_B = 110cm^2$$

$$\begin{array}{r} 132 \\ + 44 \\ \hline 176 \end{array}$$

Area: 176cm<sup>2</sup>