

Math 6 - Unit 5: Area & Volume

End of Unit Test Review #1

Name: KEY

Class Period: 1 2 3 4 Date: _____

- How could you determine the volume of a rectangular prism?
MULTIPLY LENGTH TIMES WIDTH TIMES HEIGHT
- Give a real world example of something that relates to surface area.
WALLPAPERING A WALL.
- Draw a net for the following figures:

Triangular Pyramid 

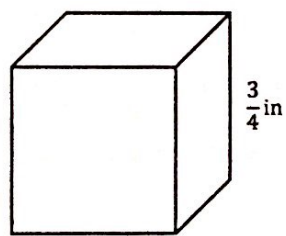
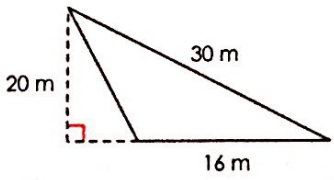
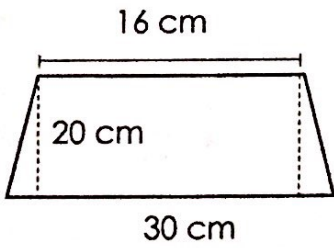
Triangular Prism 

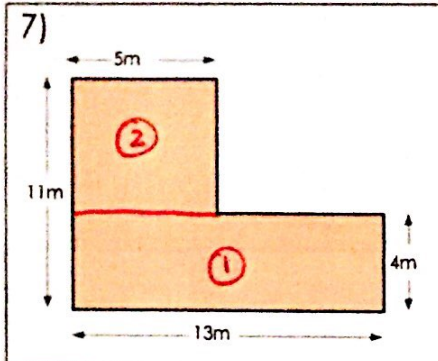
Cube 

Square Pyramid 

Rectangular Prism 

~~Triangular Prism~~

<p>4)</p> 	<p>$V = Bh$ or $V = l \cdot w \cdot h$</p> <p>$V = \frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} = \frac{27}{64}$</p> <p>Volume of the Cube: <u>$\frac{27}{64} \text{ in}^3$</u></p>
<p>5)</p> 	<p>$A = \frac{1}{2}bh$</p> <p>$A = \frac{1}{2}(16)(20)$</p> <p>$A = \frac{1}{2}(8)(20)$</p> <p>$A = 160$</p> <p>Area: <u>160m^2</u></p>
<p>6)</p> 	<p>$A = h \left(\frac{b_1 + b_2}{2} \right)$</p> <p>$A = 20 \left(\frac{16 + 30}{2} \right)$</p> <p>$A = 20 \left(\frac{46}{2} \right)$</p> <p>Area: <u>$460\text{cm}^2$</u></p>



$$A_1 = bh$$

$$A_1 = 4(13)$$

$$A_1 = 52$$

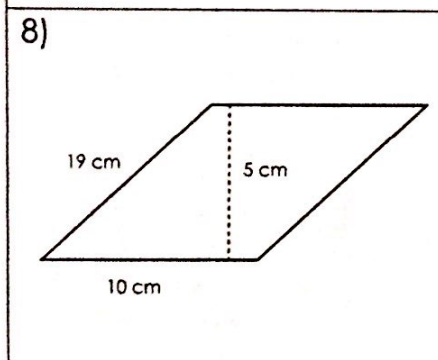
$$A_2 = bh$$

$$A_2 = 5(7)$$

$$A_2 = 35$$

$$A = \begin{array}{r} 52 \\ + 35 \\ \hline 87 \end{array}$$

Area: 87m²



$$A = bh$$

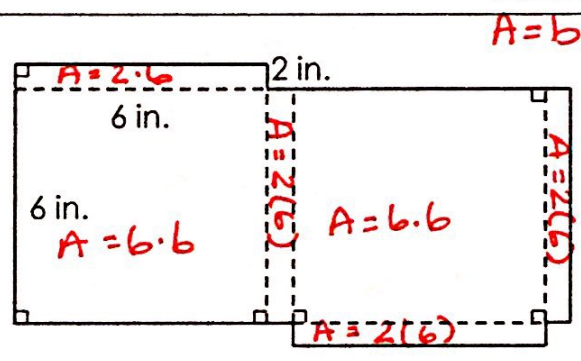
$$A = 10(5)$$

$$A = 50$$

Area: 50cm²

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?

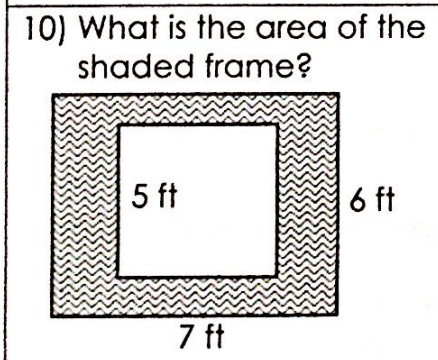


$$A = bh$$

$$SA = 4(12) + 2(36)$$

$$48 + 72$$

Surface Area: 120in²



$$A_{\square} = bh$$

$$A_{\square} = 7 \cdot 6$$

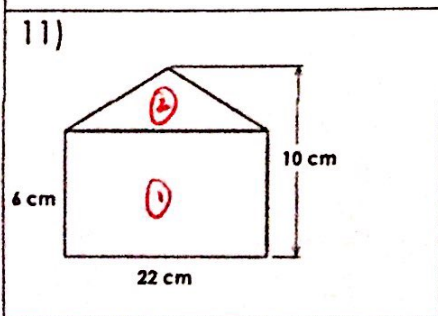
$$A_{\square} = 42$$

$$A_{\square} = 5 \cdot 5$$

$$A_{\square} = 25$$

$$A_{\text{shaded}} = \frac{42 - 25}{17}$$

Area: 17ft²



$$A_1 = bh$$

$$A_1 = 22(6)$$

$$A_1 = 132$$

$$A_2 = \frac{1}{2}bh$$

$$A_2 = \frac{1}{2} 22(4)$$

$$A_2 = 11(4) = 44$$

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

Area: 176cm²

<p>12)</p>	$A_1 = bh \quad A_2 = bh \quad A_3 = bh \quad A_4 = \frac{1}{2}bh$ $A_1 = 7 \cdot 5 \quad A_2 = 8 \cdot 5 \quad A_3 = 9 \cdot 5 \quad A_4 = \frac{1}{2}(8)(7)$ $35 \quad 40 \quad 45 \quad 28$ $A_5 = \frac{1}{2}(b)(h)$ $A_{(7)} = \frac{1}{2}(8)(7)$ 28 $SA = 35 + 40 + 45 + 28 + 28$ <p>Surface Area: <u>176 cm²</u></p>
<p>13) A fish tank is shown below. How many cubic inches of water can fit inside the tank?</p>	<p>V = l \cdot w \cdot h</p> $V = l \cdot w \cdot h$ $V = 12(10)(4\frac{1}{2})$ $V = 12(10)(\frac{9}{2})$ $V = 54(10)$ <p>Volume: <u>540 in³</u></p>
<p>14)</p>	$SA = 30 + 30 + 24 + 24 + 20 + 20$ $\begin{cases} F: A = bh = 5 \cdot 6 = 30 \\ B: \quad \quad \quad = 30 \\ S: A = bh = 4 \cdot 6 = 24 \\ S: \quad \quad \quad = 24 \\ T: A = bh = 5(4) = 20 \\ B: \quad \quad \quad = 20 \end{cases}$ <p>Total Square cm needed to wrap the outside of the box:</p> <p>Surface Area: <u>148 cm²</u></p>

15) How much paper is needed to wrap a cube with a side length of 10 cm? $6(10)(10)$
600 cm²

16) Draw 2 different nets that could be folded to make a cube.

17) A rectangular pool is 10 feet long, 14 1/2 feet wide, and 6 feet deep. How many cubic feet of water can it hold? $V = l \cdot w \cdot h$
 $V = 10 \cdot 14\frac{1}{2} \cdot 6$
 $V = 10 \cdot 87$
 $V = 870 \text{ ft}^3$

18) Give a real world example of something that relates to volume.
 AMOUNT OF ICE THAT CAN FIT IN A COOLER.