


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. **HOW MUCH PAINT WILL I NEED TO PAINT A ROOM**
(ANSWERS WILL VARY)
- Draw a net for the following figures:

Triangular Pyramid 

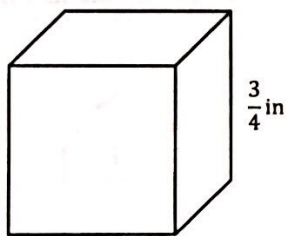
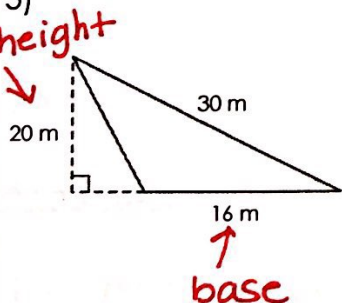
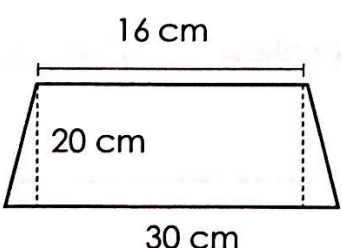
Cube 

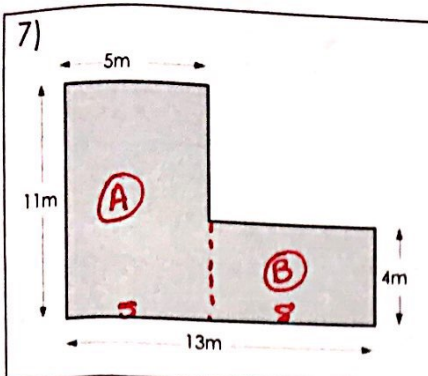
Rectangular Prism 

Triangular Prism 

Square Pyramid 

Triangular Prism **DUPLICATE**

<p>4)</p> 	$V = l \cdot w \cdot h$ $V = \frac{3}{4} \cdot \frac{3}{4} \cdot \frac{3}{4} = \frac{27}{64}$ <p style="text-align: right;">Volume of the Cube: <u>$\frac{27}{64} \text{ in}^3$</u></p>
<p>5)</p> 	$A = \frac{1}{2} bh$ $A = \frac{1}{2} (16)(20)$ $A = 8(20)$ $A = 160$ <p style="text-align: right;">Area: <u>$A = 160 \text{ m}^2$</u></p>
<p>6)</p> 	$A = h \left(\frac{b_1 + b_2}{2} \right)$ $A = 20 \left(\frac{16 + 30}{2} \right)$ $A = 20 \left(\frac{46}{2} \right)$ $A = 20(23)$ <p style="text-align: right;">Area: <u>$A = 460 \text{ cm}^2$</u></p>

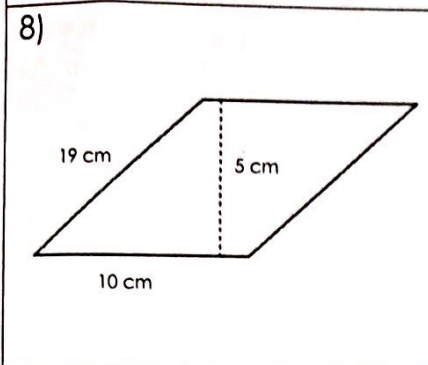


(A) $A = bh$
 $A = 5(11)$
 $A = 55$

(B) $A = bh$
 $A = 8(4)$
 $A = 32$

Total Area = $55 + 32$

Area: 87 m^2

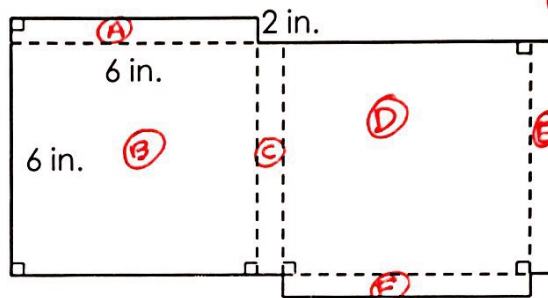


$A = bh$
 $A = 10 \cdot 5$
 $A = 50$

Area: 50 cm^2

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) $A = bh$ C, E + F are the same
 $A = 6 \cdot 2$
 $A = 12$

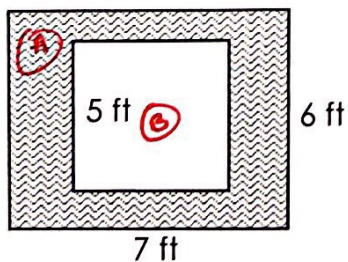
(B) (D)
 $A = bh$
 $A = 6 \cdot 6$
 $A = 36$

SA = Total of all the areas of the surfaces.

$SA = 12 + 12 + 12 + 12 + 36 + 36$

Surface Area: 120 in^2

10) What is the area of the shaded frame?



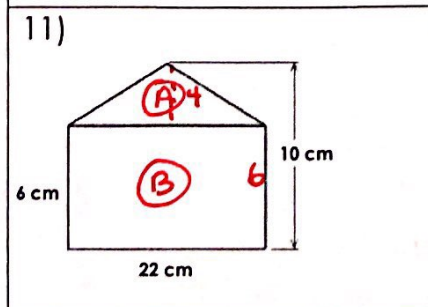
(A) $A = bh$
 $A = 7 \cdot 6$
 $A = 42 \text{ ft}^2$

(B) $A = bh$
 $A = 5 \cdot 6$
 $A = 25 \text{ ft}^2$

Area of shaded region = (A) - (B)

$A = 42 - 25$

Area: 17 ft^2



(A) $A = \frac{1}{2}bh$
 $A = \frac{1}{2}(22)(4)$
 $A = 11(4)$
 $A = 44$

(B) $A = bh$
 $A = 6 \cdot 22$
 $A = 132$

TOTAL AREA = (A) + (B)
 $44 + 132$

Area: 176 cm^2

12)

(A) $A = \frac{1}{2}bh$
 $A = \frac{1}{2}(8)(7)$
 $A = 4(7)$
 $A = 28$

(B) $A = bh$
 $A = 5 \cdot 7$
 $A = 35$

(C) $A = bh$
 $A = 8 \cdot 5$
 $A = 40$

(D) $A = bh$
 $A = 9 \cdot 5$
 $A = 45$

(E) $A = \frac{1}{2}bh$
 $A = \frac{1}{2}(8)(7)$
 $A = 4(7)$
 $A = 28$

$SA = A + B + C + D + E$
 $SA = 28 + 35 + 40 + 45 + 28$

Surface Area: 176 cm²

13) A fish tank is shown below. How many cubic inches of water can fit inside the tank?

$V = l \cdot w \cdot h$
 $V = (10)(4.5)(12)$
 $V = 45(12)$
 $V = 540 \text{ in}^3$

Volume: 540 in³

14)

$SA =$

Front $A = bh$ $A = 3 \cdot 4 = 12$
 Back $A = bh$ $A = 3 \cdot 4 = 12$
 Side $A = bh$ $A = 3 \cdot 4 = 12$
 Side $A = bh$ $A = 3 \cdot 4 = 12$
 Top $A = bh$ $A = 3 \cdot 3 = 9$
 Bottom $A = bh$ $A = 3 \cdot 3 = 9$

$SA = 12 + 12 + 12 + 12 + 9 + 9$

Total Square cm needed to wrap the outside of the box:

Surface Area: ~~60~~ 66 cm²

15) How much paper is needed to wrap a cube with a side length of 10 cm?
 6 faces each face: $A = bh$ $A = 10 \cdot 10 = 100$ $6 \times 100 = \boxed{600 \text{ cm}^2}$

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

 (ANSWERS WILL VARY)

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?
 $V = l \cdot w \cdot h$ $V = 10 \cdot 14 \frac{1}{2} \cdot 6$ $V = 145 \cdot 6$
 $V = 10 \cdot 14.5 \cdot 6$ $V = 870 \text{ ft}^3$

18) Give a real world example of something that relates to volume.
 How much cereal will fit into a cereal box?
 (ANSWERS WILL VARY)