

4/19/17 CCM6+

***FINAL REVIEW OF UNIT 12! TEST tomorrow!***

1. Agenda...Study for test tomorrow!
2. Get out study guide to check and calc!
3. Complete Wed and Thurs warm-ups  
**no calculators on any questions**

## Q4 Wk2 Warm-ups

Wed

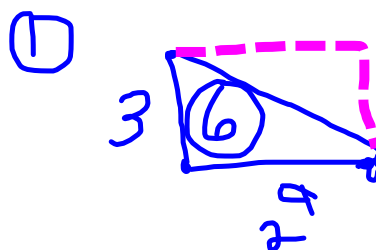
$$\textcircled{1} \frac{1}{3} \div 6$$

$$\frac{1}{3} \cdot \frac{1}{6}$$

$$\frac{1}{18}$$

$$\textcircled{2} \frac{24}{18} = \frac{4}{3}$$

Thurs



$\textcircled{2}$  1

$$\begin{array}{l} \uparrow \\ 3 \\ \downarrow \end{array} \begin{array}{l} 3^3 = 3 \cdot 3 \cdot 3 = 27 \\ 3^2 = 3 \cdot 3 = 9 \\ 3^1 = 3 \\ 3^0 = 3 \div 3 = 1 \end{array} \begin{array}{l} \downarrow \\ \div 3 \end{array}$$

✓ p. 36

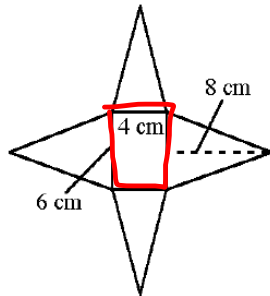
Unit 12 STUDY GUIDE

**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

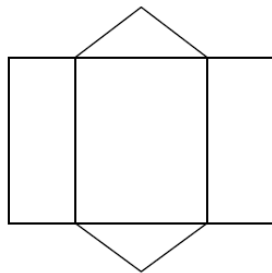
Name the space figure you can form from the net.

A 1.



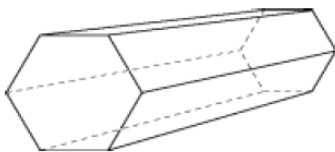
- a.  rectangular pyramid
- b.  square pyramid
- c.  rectangular prism
- d.  triangular prism

B 2.



- a.  rectangular pyramid
- b.  triangular prism
- c.  rectangular prism
- d.  triangular pyramid

D 3. Name the solid figure represented by the object.

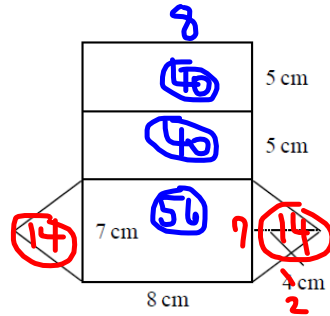


- a.  Hexagonal pyramid
- b.  Pentagonal pyramid
- c.  Pentagonal prism
- d.  Hexagonal prism

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Find the surface area of the space figure represented by the net.

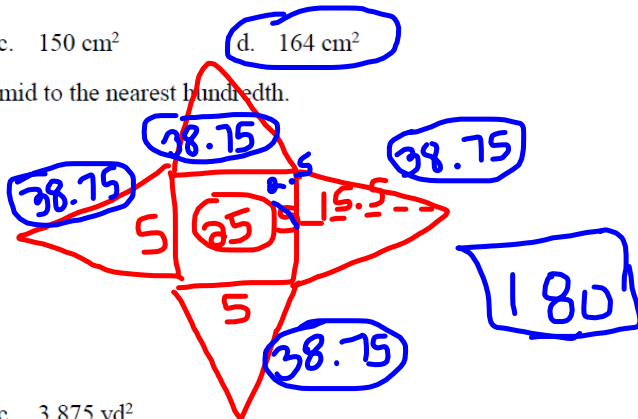
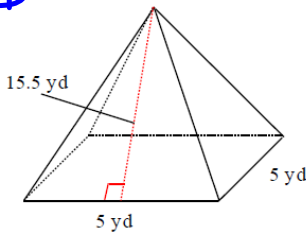
D 4.



- a.  $124 \text{ cm}^2$       b.  $110 \text{ cm}^2$       c.  $150 \text{ cm}^2$       d.  $164 \text{ cm}^2$

D 5.

Find the surface area of the pyramid to the nearest hundredth.

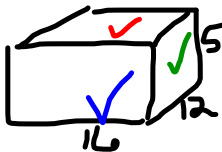


- a.  $77.7 \text{ yd}^2$       b.  $155 \text{ yd}^2$       c.  $3,875 \text{ yd}^2$       d.  $180 \text{ yd}^2$

D 6.

Find the surface area of a rectangular prism that is 16 inches long, 12 inches wide, and 5 inches high.

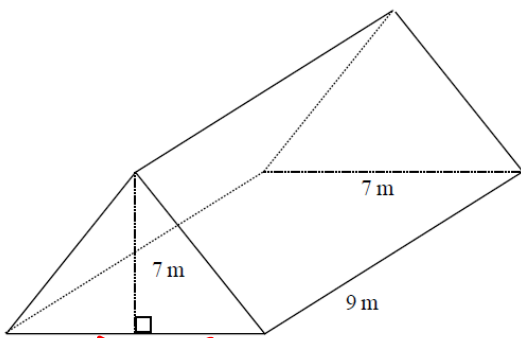
- a.  $960 \text{ in.}^2$       b.  $689 \text{ in.}^2$       c.  $714 \text{ in.}^2$       d.  $664 \text{ in.}^2$



$$\begin{array}{r}
 T \ 16 \times 12 = 192 \\
 B \ \phantom{16 \times 12} = 192 \\
 L \ 5 \times 12 = 60 \\
 R \ \phantom{5 \times 12} = 60 \\
 F \ 16 \times 5 = 80 \\
 B \ \phantom{16 \times 5} = 80 \\
 \hline
 664
 \end{array}$$

D 7.

Find the volume of the triangular prism.



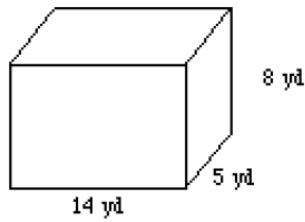
$$3.5 \times 7 \times 9 = 220.5$$

- a.  $24.5 \text{ m}^3$       b.  $441 \text{ m}^3$       c.  $31.5 \text{ m}^3$       d.  $220.5 \text{ m}^3$

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Find the volume of the rectangular prism.

C 8.



$$14 \times 5 \times 8 = 560$$

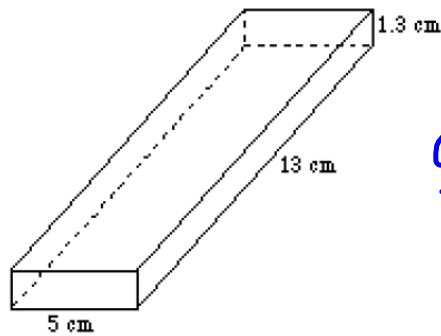
a. 108 yd<sup>3</sup>

b. 540 yd<sup>3</sup>

c. 560 yd<sup>3</sup>

d. 444 yd<sup>3</sup>

D 9.



$$5 \times 13 \times 1.3 = 84.5$$

a. 77.2 cm<sup>3</sup>

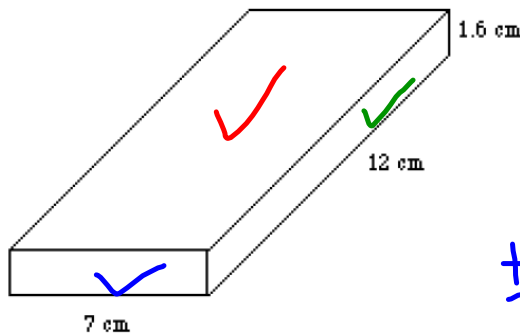
b. 81.9 cm<sup>3</sup>

c. 88.4 cm<sup>3</sup>

d. 84.5 cm<sup>3</sup>

Find the surface area of the prism.

A 10.



$$\begin{array}{r}
 \text{T } 7 \times 12 = 84 \\
 \text{B } \quad \quad = 84 \\
 \text{L } 12 \times 1.6 = 19.2 \\
 \text{R } \quad \quad = 19.2 \\
 \text{F } 7 \times 1.6 = 11.2 \\
 \text{B } \quad \quad = 11.2 \\
 \hline
 228.8
 \end{array}$$

a. 228.8 cm<sup>2</sup>

b. 114.4 cm<sup>2</sup>

c. 206.4 cm<sup>2</sup>

d. 190.4 cm<sup>2</sup>

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C

11. Find the surface area.

a. 6,720 m<sup>2</sup>      b. 1,662 m<sup>2</sup>      **c. 1,872 m<sup>2</sup>**      d. 3,360 m<sup>2</sup>

Short Answer

12. Determine the surface area of the rectangular prism. The prism is made up of congruent cubes, each measuring 2 m x 2 m x 2 m. Hint: Each block is NOT 1 m x 1 m x 1 m!

$T \ 8 \times 8 = 64$   
 $B \quad \quad = 64$   
 $L \ 6 \times 8 = 48$   
 $R \quad \quad = 48$   
 $+ \ F \ 6 \times 8 = 48$   
 $\quad \quad \quad = 48$   


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 $SA = 320 \text{ m}^2$

13. Michelle wants to make a packing box from some cardboard she has. She wants the box to be a rectangular prism with dimensions 10 in x 12 in x 8 in. Draw a possible net and label dimensions for the packing box and find the total Surface Area.

$T \ 10 \times 12 = 120$   
 $B \quad \quad = 120$   
 $L \ 8 \times 12 = 96$   
 $R \quad \quad = 96$   
 $+ \ F \ 10 \times 8 = 80$   
 $\quad \quad \quad = 80$   


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 $SA = 592 \text{ in}^2$

14. A rectangular prism has a Volume of 24 in<sup>3</sup>. Name two different sets of possible dimensions for this rectangular prism.

$6 \times 4 \times 1$        $V = \frac{24}{1} \times \frac{1}{1} \times \frac{1}{1} \quad | \quad 12 \times 2 \times 1$   
 $4 \times 4 \times 1.5$        $V = \frac{24}{2} \times \frac{3}{3} \times \frac{4}{4} \quad | \quad 6 \times 2 \times 2$

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$\frac{1}{2} \times 8 \times 6$        $\frac{1}{2} \times 16 \times 1$   
 $\frac{1}{2} \times 12 \times 4$        $1 \times \frac{1}{2} \times 48$        $\frac{1}{2} \times 2 \times 24$   
 $9 \times \frac{1}{3} \times 8$        $4 \frac{4}{5} \times 5 \times 1$

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15. Megan has a large packing box shaped as a cube with a volume of 216 cubic feet.  
 a. What is the side length for the cubical box? Explain how you find the length.

$$\underbrace{6 \cdot 6 \cdot 6}_{\text{same \#}} = 216 \rightarrow \underline{6}$$

- b. Megan would like to design a box that is a rectangular prism, but not a cube. What are a possible length, width, and height that she could use if she wants this box to have the same volume as the cube? Explain how you find the dimensions.

$4 \times 54 \times 1$   
 $6 \cdot 2 \cdot 18 = 216$   
 $9 \times 3 \times 8$   
 $108 \times 2 \times 1$   
 $1 \times 1 \times 216$   
 $12 \times 3 \times 6$   
 $43.2 \times 2.5 \times 2$   
 $2 \times 2 \times 54$   
 $72 \times 3 \times 1$   
 $13.5 \times 8 \times 2$

16. A rectangular prism has dimensions of  $3\frac{1}{2} \times 4 \times 3\frac{1}{2}$

What is the volume of the rectangular prism? Show your work without a calculator!

$\frac{7}{2} \cdot \frac{4}{1} \cdot \frac{7}{2} = \frac{49}{1} = 49$

How many  $\frac{1}{2}$  cubes will fit inside? Cubic units

$\frac{7}{2} \cdot \frac{8}{2} \cdot \frac{7}{2} = 392$

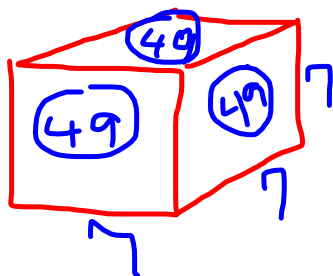


What else do you want to review?

**Test 12 is tomorrow!**

$$2\frac{1}{3} \times 2 \times 1\frac{1}{3} \rightarrow \begin{array}{l} \text{cubes} \\ \frac{1}{3} \\ \text{fit in?} \end{array}$$
$$\frac{7}{3} \times \frac{6}{3} \times \frac{4}{3} = 168 \text{ cubes}$$

The surface area of a cube is  $294 \text{ in}^2$ . What is the Volume?



$$\frac{294}{6} = 49$$

$$V = 343$$

