

4/17/17 CCM6

Final Practice Day for SA and V and 3D shapes.

1. Get out study guide to check and calculator.
2. Write in agenda...HW is study for test 12!
Your TEST is TOMORROW!

WARM-UP Q4 Week 2

Monday

1) $x \geq 18$



2) $3.1 \times 3.1 \times 3.1 = 29.791$

Tuesday

1) A $\frac{\$3.49}{1002}$

(Note: The entire expression is circled in blue.)

B $\frac{\$11}{3202}$
 $\frac{\$3.67}{1002}$

2) $6 \frac{1236}{6}$

(Note: The fraction part is circled in green, and the number 6 below it is also circled in green.)

12

(Note: The number 12 is circled in green.)

✓ p. 36

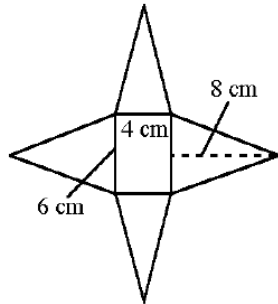
Unit 12 STUDY GUIDE

Multiple Choice

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

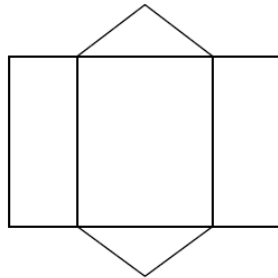
Name the space figure you can form from the net.

A 1.



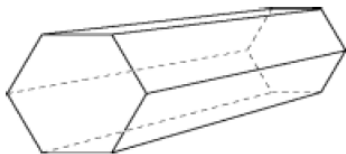
- a. rectangular pyramid
- b. square pyramid
- c. rectangular prism
- d. triangular prism

B 2.



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

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



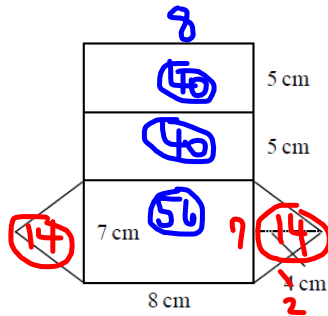
- a. Hexagonal pyramid
- b. Pentagonal pyramid
- c. Pentagonal prism
- d. Hexagonal prism

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

D

4.

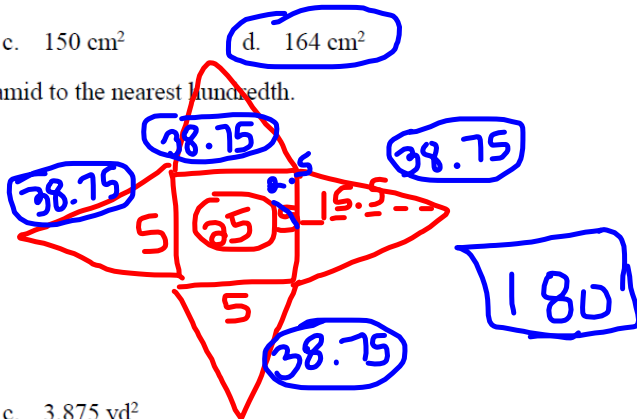
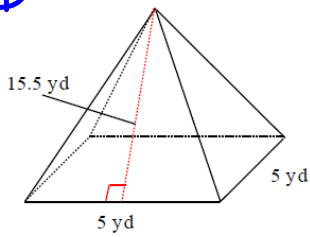


- a. 124 cm² b. 110 cm² c. 150 cm² d. 164 cm²

D

5.

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



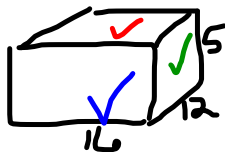
- a. 77.7 yd² b. 155 yd² c. 3,875 yd² d. 180 yd²

D

6.

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

- a. 960 in.² b. 689 in.² c. 714 in.² d. 664 in.²

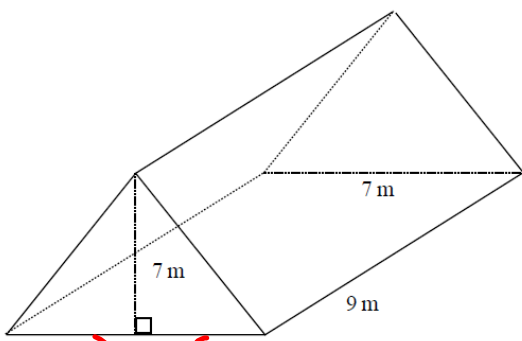


$$\begin{array}{r}
 T \quad 16 \times 12 = 192 \\
 B \quad \quad \quad = 192 \\
 L \quad 5 \times 12 = 60 \\
 R \quad \quad \quad = 60 \\
 F \quad 16 \times 5 = 80 \\
 B \quad \quad \quad = 80 \\
 \hline
 664
 \end{array}$$

D

7.

Find the volume of the triangular prism.



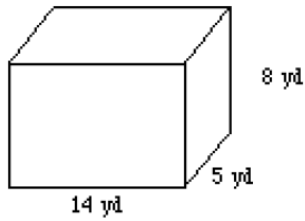
$$3.5 \times 7 \times 9 = 220.5$$

- a. 24.5 m³ b. 441 m³ c. 31.5 m³ d. 220.5 m³

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Find the volume of the rectangular prism.

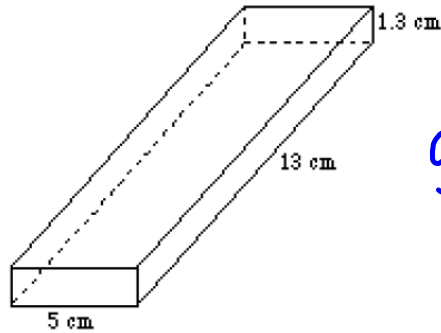
C 8.



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

- a. 108 yd³ b. 540 yd³ c. 560 yd³ d. 444 yd³

D 9.

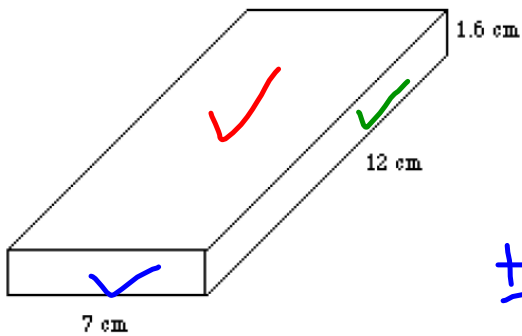


$$5 \times 13 \times 1.3 = 84.5$$

- a. 77.2 cm³ b. 81.9 cm³ c. 88.4 cm³ d. 84.5 cm³

Find the surface area of the prism.

A 10.



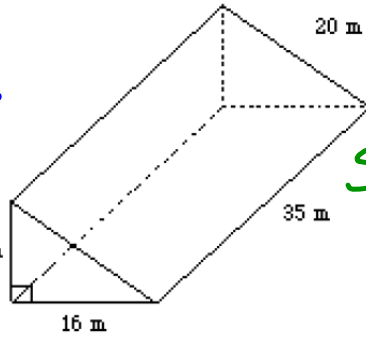
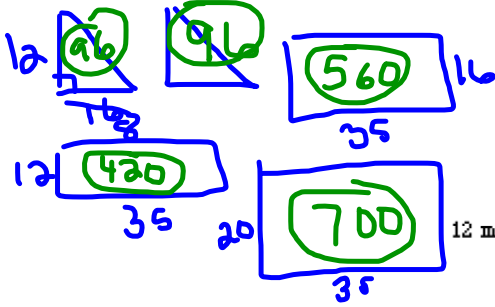
$$\begin{array}{r}
 T \quad 7 \times 12 = 84 \\
 B \quad \quad \quad = 84 \\
 L \quad 12 \times 1.6 = 19.2 \\
 R \quad \quad \quad = 19.2 \\
 F \quad 7 \times 1.6 = 11.2 \\
 B \quad \quad \quad = 11.2 \\
 \hline
 228.8
 \end{array}$$

- a. 228.8 cm² b. 114.4 cm² c. 206.4 cm² d. 190.4 cm²

C

✓ p. 39

11. Find the surface area.

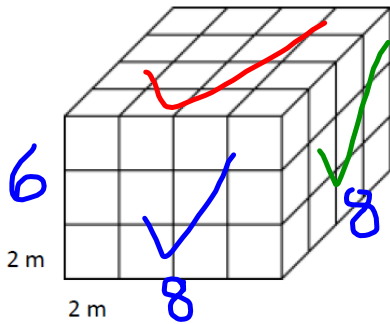


SA = 1972

- a. 6,720 m² b. 1,662 m² c. 1,872 m² d. 3,360 m²

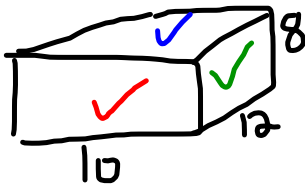
Short Answer

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!



$$\begin{aligned}
 &T \quad 8 \times 8 = 64 \\
 &B \quad \quad \quad = 64 \\
 &L \quad 6 \times 8 = 48 \\
 &R \quad \quad \quad = 48 \\
 &F \quad 6 \times 8 = 48 \\
 &+ B \quad \quad \quad = 48 \\
 \hline
 &SA = 320 \text{ m}^2
 \end{aligned}$$

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.



$$\begin{aligned}
 &T \quad 10 \times 12 = 120 \\
 &B \quad \quad \quad = 120 \\
 &L \quad 8 \times 12 = 96 \\
 &R \quad \quad \quad = 96 \\
 &F \quad 10 \times 8 = 80 \\
 &+ B \quad \quad \quad = 80 \\
 \hline
 &SA = 592 \text{ in}^2
 \end{aligned}$$

14. A rectangular prism has a Volume of 24 in³. Name two different sets of possible dimensions for this rectangular prism.

6 x 4 x 1

V = 24 x 1 x 1 12 x 2 x 1

V = 2 x 3 x 4

4 x 4 x 1.5

6 x 2 x 2

✓ p. 40

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.

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

- 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.

$$\underline{6} = \underline{2} \cdot \underline{18} = 216$$

$$9 \times 3 \times 8$$

$$12 \times 3 \times 6$$

$$2 \times 2 \times 54$$

$$108 \times 2 \times 1$$

$$1 \times 1 \times 216$$

$$72 \times 3 \times 1$$

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!

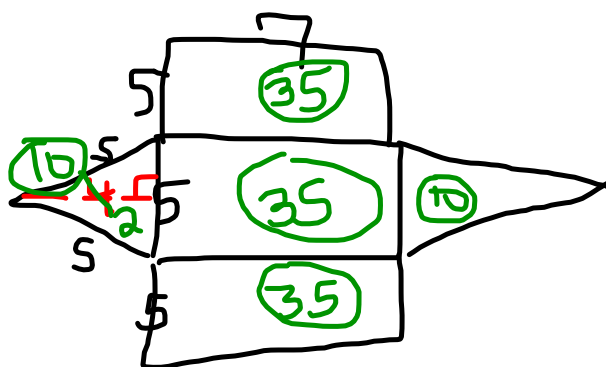
$$\frac{7}{2} \cdot \frac{4}{1} \cdot \frac{7}{2} = \frac{49}{1} = 49$$

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?

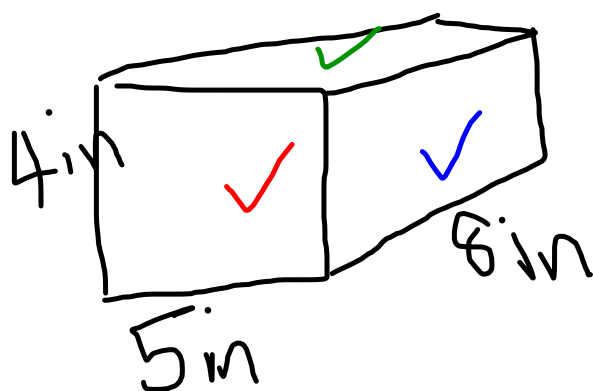
Test 12 is tomorrow!



SA =

125

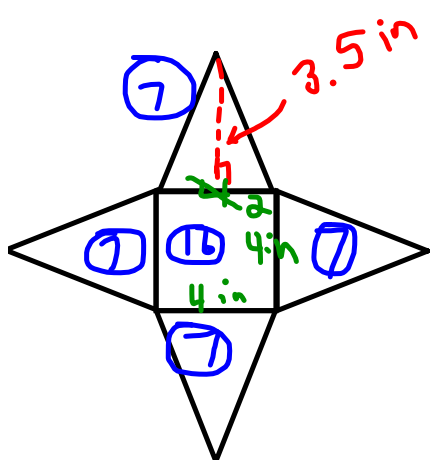
sq units



$$V = \frac{4 \times 5 \times 8 = 160}{1} \text{ in}^3$$

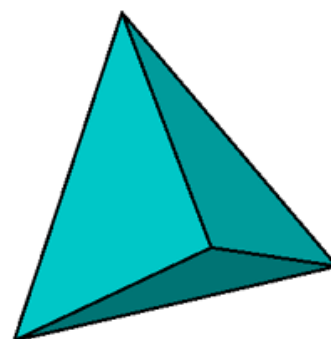
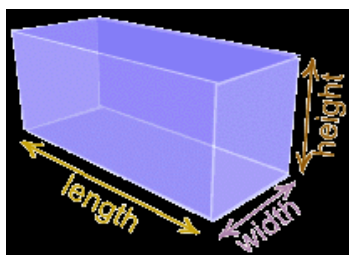
$$SA = \frac{184}{1} \text{ in}^2$$

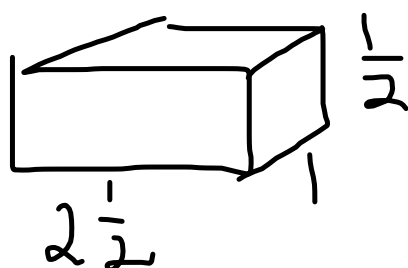
- 40
- 40
- 32
- 32
- 20
- 20



$$SA = \underline{44} \text{ in}^2$$

Name it. Tell how many F, V, E it has.





$\frac{1}{2}$ cubes?

$$\frac{5}{2} \cdot \frac{2}{2} \cdot \frac{1}{2} = 10$$

cubes

$$V = \underline{\quad} ?$$
$$\frac{10}{8} = \frac{5}{4} = 1.25$$
$$= 1\frac{1}{4}$$