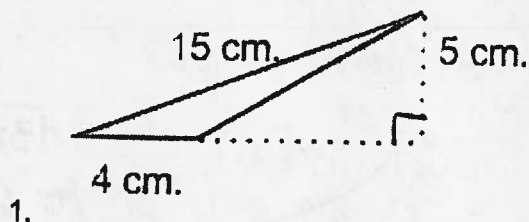


Math 6 Ch 9 Test Study Guide

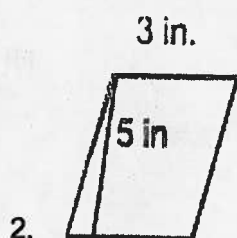
Name Key

Find the area for numbers 1-3



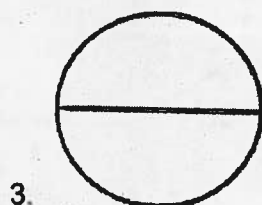
$$A = \frac{1}{2} \times 4 \times 5$$

$$A = 10 \text{ cm}^2$$



$$A = 3 \times 5$$

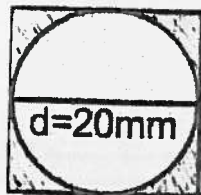
$$A = 15 \text{ in}^2$$



The diameter of the circle is 8 cm. Find the circle's EXACT

area =  $\pi 4^2$  or  $A = \pi 16$  circumference =  $\pi 8$

4. Find the area of the shaded region.



$$\square = 20 \times 20$$

$$A = 400 \text{ mm}^2$$

$$\bigcirc = 3.14 \times 10^2$$

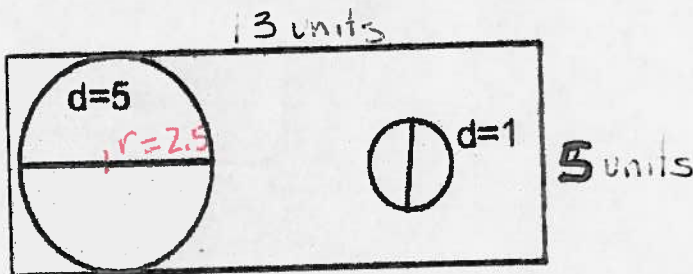
$$A = 3.14 \times 100$$

$$A = 314 \text{ mm}^2$$

$$\begin{array}{r} 400 \\ - 314 \\ \hline 86 \text{ mm}^2 \\ \text{difference} \end{array}$$

5. A walkway in a park is circular. The diameter of the walk is 40 meters. If you walk completely around the walkway, how far have you walked?  $C = 40 * 3.14 = 125.6 \text{ m.}$   
 Half way around?  $62.8 \text{ m.}$

6. Find the area of the rectangle, then find the area of the largest circle in the rectangle.



~~$13 \times 5 = 65 \text{ units}^2$~~   
 ~~$A = 39 \text{ units}^2$~~   
 $A = 3.14 \times 2.5^2 = 19.625 \text{ or } 19\frac{5}{8} \text{ units}^2$

7. If a square field is enclosed by 48 feet of fence, how many square feet are in the field?

$48 \div 4 = 12$        $12 \times 12 = 144 \text{ ft}^2$

8. Can two squares have the same area but different perimeters? Give an example.

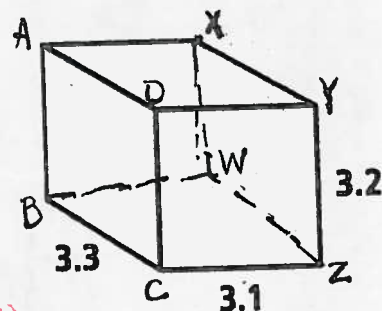
Yes  $10 \times 10 = 100$        $5 \times 20 = 100$       No

9. Find the surface area of the prism.

$(2 \times 3.3 \times 3.1) + (2 \times 3.3 \times 3.2) + (2 \times 3.2 \times 3.1) = 61.42 \text{ units}^2$

10. What other face has the same area as rectangle ABCD?

WXYZ



11. a. What is the surface area?

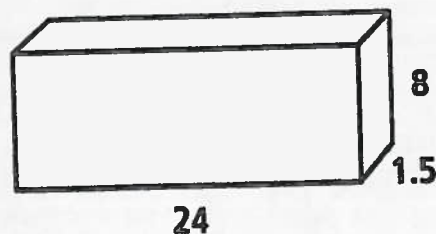
$(2 \times 24 \times 1.5) + (2 \times 24 \times 8) + (2 \times 1.5 \times 8) = 480$

- b. What happens to the surface area if you remove the "top" of the box?

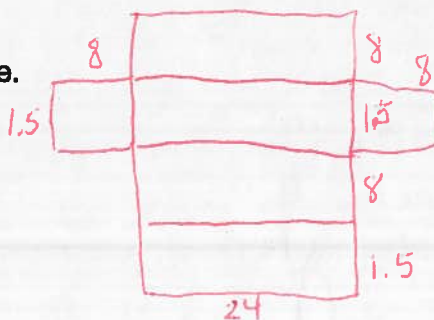
$(480) - (24 \times 1.5) = 444$

12. What is the volume?

$24 \times 1.5 \times 8 = 288 \text{ units}^3$



13. Draw a net for the figure.



key

Extra Quiz Questions:

1. A golf hole has a diameter of 4.25 inches. Find the area and the circumference of the hole?

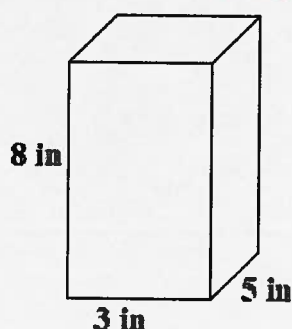
$$A = \pi \cdot r^2 = \pi \cdot 2.125^2 = \pi \cdot 2.125 \cdot 2.125 = 14.19 \text{ in}^2$$

$$C = \pi \cdot d = \pi \cdot 4.25 = 13.35 \text{ in}$$



so  $r = 2.125$

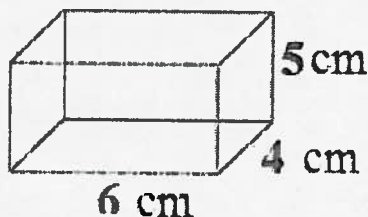
2. Find the volume of the rectangular prism. Show all work.



$$V = L \cdot W \cdot h$$

$$V = 8 \cdot 3 \cdot 5 = 120 \text{ in}^3$$

3. Find the surface area of the rectangular prism. Show your work.

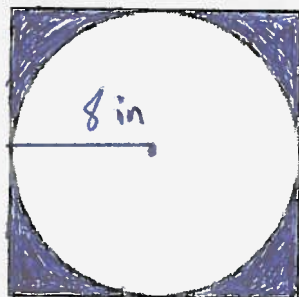


$$SA = 2 \cdot L \cdot W + 2 \cdot L \cdot h + 2 \cdot W \cdot h$$

$$2 \cdot 6 \cdot 4 + 2 \cdot 4 \cdot 5 + 2 \cdot 6 \cdot 5$$

$$48 + 40 + 60 = 148 \text{ cm}^2$$

4. Find the area of the shaded region. Show your work.



Whole shape

Inside circle

$$16 \cdot 16 - 8^2 \cdot \pi$$

$$256 - 201.06$$

$$\text{About } 54.94 \text{ in}^2$$

