

**Math 7 ACC Unit 6 Study Guide**

**Calculators Allowed (round to nearest hundredth). BE SURE TO SHOW YOUR WORK!!**

Name: Key Date: \_\_\_\_\_

$C = \pi d$   
 $C = 2\pi r$

1.) Answer these questions about 4 different circles.

a. What is the circumference of a circle that has a diameter of 20 feet?

$20\pi = \boxed{62.8 \text{ ft}}$

b. What is the circumference of a circle that has a radius of 5 cm?

$2\pi 5 = \boxed{31.4 \text{ cm}}$

c. A circle has a circumference of 10 feet. What is the diameter?

$\boxed{d = 3.18 \text{ ft}}$

$C = \pi d$   
 $10 = 3.14 d$   
 $\frac{10}{3.14} = \frac{3.14 d}{3.14}$

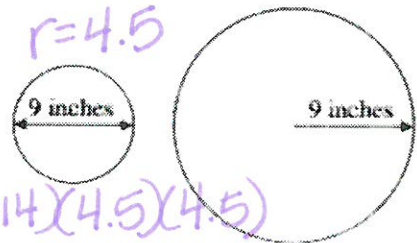
d. A circle has a circumference of 63 feet. What is the radius?

$\boxed{r = 10.03 \text{ ft}}$

$C = 2\pi r$   
 $63 = 2(3.14)r$   
 $\frac{63}{6.28} = \frac{2(3.14)r}{6.28}$

2.) Two pizza sizes are shown here. How many more square inches of pizza are in the larger pizza?

$A = \pi r^2$



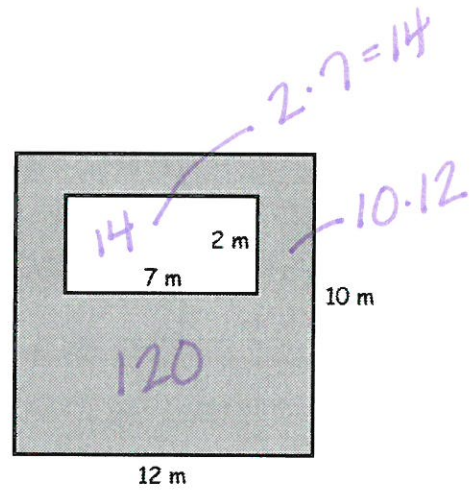
$A = (3.14)(4.5)(4.5)$   
 $= 63.59 \text{ in}^2$

$A = (3.14)(9)(9)$   
 $= 254.34 \text{ in}^2$

$254.34 - 63.59 = \boxed{190.75 \text{ in}^2}$

3.) Calculate the area of the shaded region. Show your work.

$120 - 14 = \boxed{106 \text{ m}^2}$



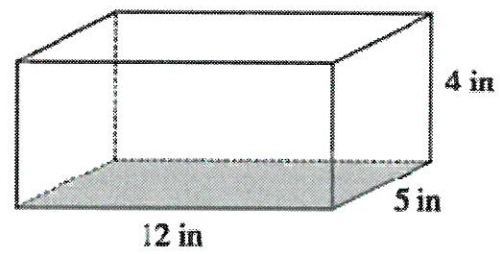
4.) A shoebox is shown here.

a. What is the area of the shaded region along the bottom of the box?

$12 \cdot 5 = \boxed{60 \text{ in}^2}$

b. What is the volume of the box?

$12 \cdot 5 \cdot 4 = \boxed{240 \text{ in}^3}$



5.) The rectangular solid below is made of cubic centimeters.

a. What is the area of the shaded top base?

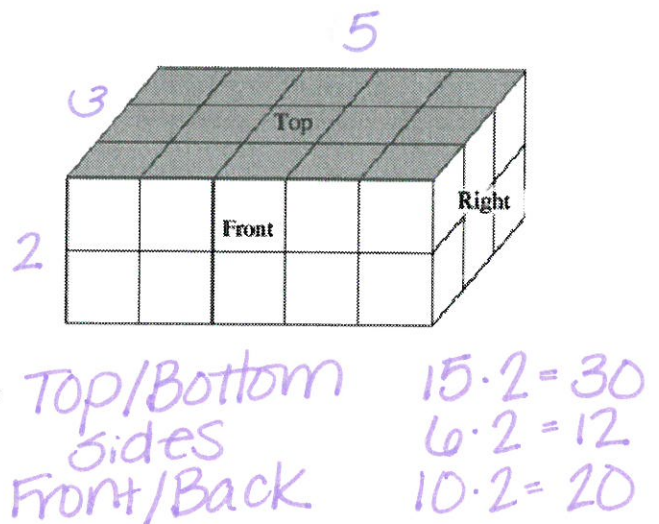
$$3 \cdot 5 = \boxed{15 \text{ sq. cm}}$$

b. What is the volume of the entire solid?

$$3 \cdot 5 \cdot 2 = \boxed{30 \text{ cu. cm}}$$

c. What is the surface area of all 6 faces combined?

$$30 + 12 + 20 = \boxed{62 \text{ sq. cm}}$$



6.) Consider the circle shown.

a. What is the length of the radius?

$$\boxed{3 \text{ in}}$$

b. What is the length of the diameter?

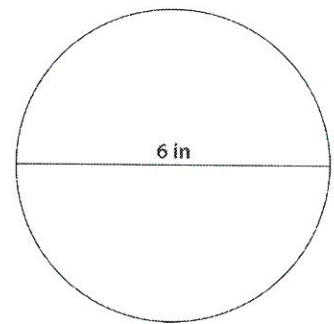
$$\boxed{6 \text{ in}}$$

c. What is the circumference?

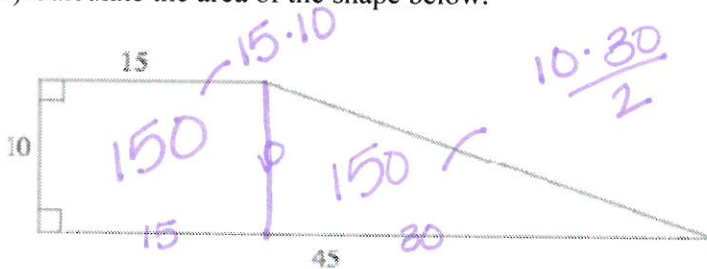
$$6\pi = \boxed{18.84 \text{ in}}$$

d. What is the area?

$$9\pi = \boxed{28.26 \text{ in}^2}$$

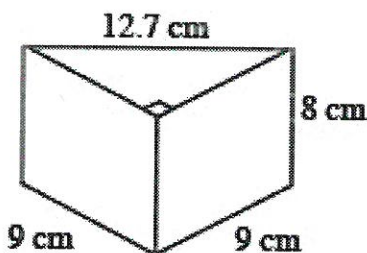


7.) Calculate the area of the shape below.



$$\boxed{300 \text{ units}^2}$$

8.) Calculate the volume of the non-rectangular prism below.



Area of base  $\cdot$  height

$$\frac{9 \cdot 9}{2} \cdot 8$$

$$40.5 \cdot 8 = \boxed{324 \text{ cm}^3}$$