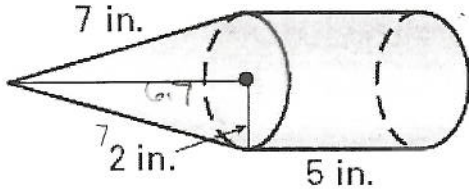


# Tour de Geometry

## Stage 3 Semester 2

Team Name: Key new

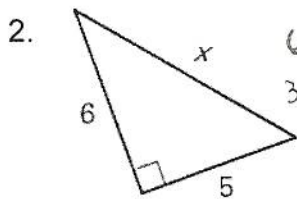
1. Find the volume of the solid.



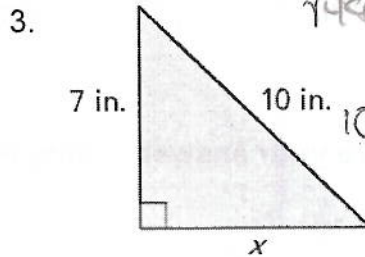
cone + cylinder  
 $\frac{Bh}{3} + Bh$   
 $\frac{\pi \cdot 2^2 \cdot 6.7}{3} + \pi \cdot 2^2 \cdot 5$

$v = \underline{90.9 \text{ in.}^2}$

Find the missing length in simplest radical form.



$6^2 + 5^2 = x^2$   
 $36 + 25 = x^2$



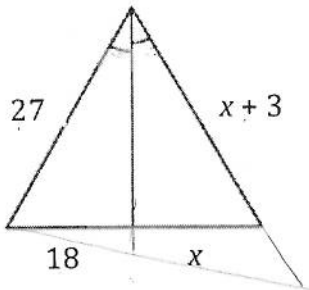
$\sqrt{98} = 7\sqrt{2}$   
 ~~$\sqrt{98}$~~

$10^2 = 7^2 + x^2$

2.  $x = \underline{\sqrt{61}}$

3.  $x = \underline{\sqrt{51}}$

4. Find the value of x.



$\frac{18}{x} = \frac{27}{x+3}$

$27x = 18x + 54$   
 $9x = 54$

4.  $x = \underline{6}$



For #s 5 – 8, Determine if the statements below are *always*, *sometimes*, or *never* true.

- sec 8.5

5. Diagonals of a trapezoid are congruent (isosceles trap. yes) Sometimes

6. Opposite sides of a rectangle are congruent always

7. Opposite angles of an isosceles trapezoid are congruent never

8. Consecutive angles of a trapezoid are congruent Sometimes

9. What is the sum of the exterior angles of a 23-gon? 360°

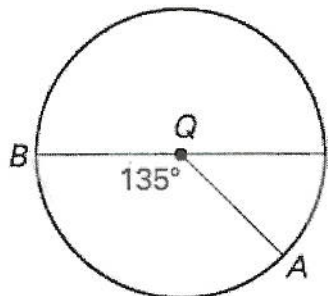
10. What is the measure of each interior angle of a regular 19-gon?

$$(n-2)180 = 3240 \div 19$$

$$\underline{161.05^\circ}$$

Find the length of the  $m\widehat{AB}$ .

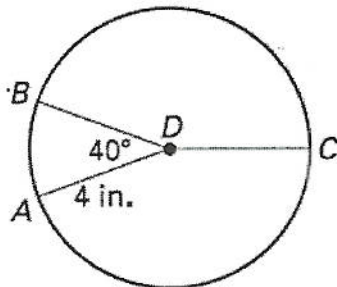
12.



$d = 20 \text{ cm}$

$$\frac{x}{2\pi \cdot 10} = \frac{135}{360}$$

13.



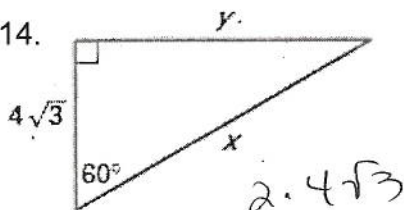
$$\frac{x}{2\pi \cdot 4} = \frac{40}{360}$$

12.  $\underline{m\widehat{AB} = 23.56 \text{ cm}}$

13.  $\underline{2.79 \text{ cm}}$

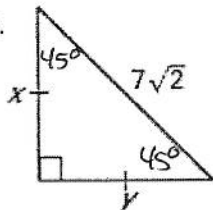
Find the value of  $x$  and  $y$ . Leave your answer in simplest radical form.

14.

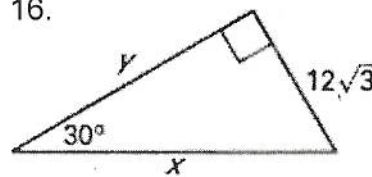


$2 \cdot 4\sqrt{3}$

15.



16.



$x = 8\sqrt{3} \quad y = 12$

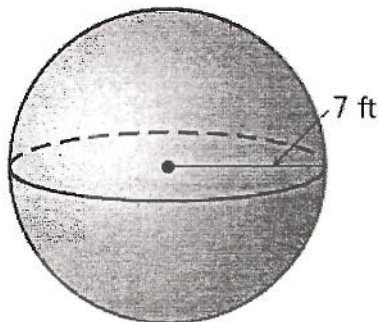
$x = 7 \quad y = 7$

$x = 24\sqrt{3} \quad y = 36$

$4 \cdot \sqrt{3} \cdot \sqrt{3} \rightarrow$

$12\sqrt{3} \cdot \sqrt{3}$

17. Find the surface area and volume of the sphere



$$SA = 4\pi r^2$$

$$SA = 4\pi \cdot 7^2$$

$$V = \frac{4\pi r^3}{3}$$

$SA = \underline{615.75 \text{ ft}^2}$

$V = \underline{1436.76 \text{ ft}^3}$