

5-12-14

5<sup>th</sup> Geo

The radius of a circle is doubled. How much larger is the area?

$$A = \pi r^2$$

New

$$A = \pi \cdot (2r)^2$$
$$\pi \cdot \boxed{4} r^2$$

The radius of a circle is 5 times larger. How much larger is the area?

$$A = \pi r^2$$

New

$$A = \pi \cdot (5r)^2$$
$$\pi \cdot \boxed{25} r^2$$

The radius of a circle is increased by 20%. How much larger is the area?

$$A = \pi r^2$$

New

$$A = \pi (1.2r)^2$$
$$= \pi \cdot 1.44 r^2$$

The ratio of the areas  
of two circles is 4:25.  
What is the ratio of  
the radii?

$$2:5$$

The ratio of the radii  
of 2 spheres is 2:3. What  
is the ratio of their volumes?

$$8:27$$

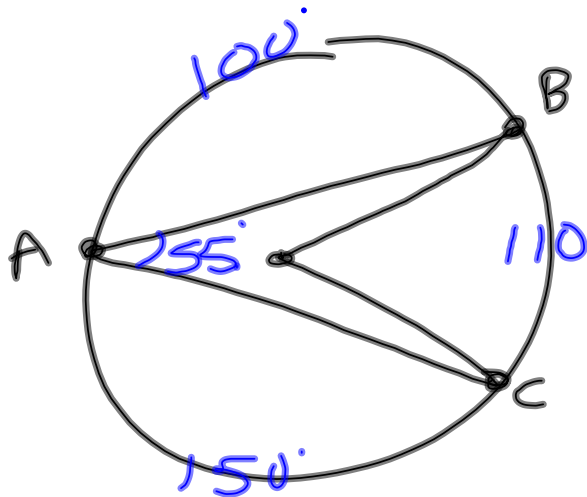
The ratio of the volume  
of two spheres is  
125:512. What is the  
ratio of the radii?

$$5:8$$

The radius of a circle  
is decreased by 20%.  
How much does the area  
decrease by?

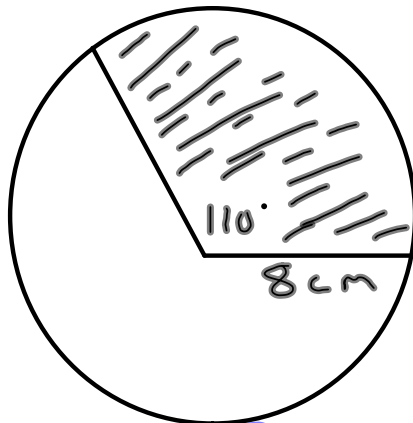
$$A = \pi \cdot r^2$$

$$A = \pi \cdot (.8r)^2$$
$$\pi \cdot \boxed{.64} r^2$$



$$\widehat{AC} = 150^\circ \quad \widehat{AB} = 100^\circ$$

$$\angle BAC = ? \quad 55^\circ$$



$$A = \pi r^2$$

$$\frac{110}{360} \cdot \pi \cdot 8^2 \approx 61 \text{ cm}^2$$

Fractional  
Part

5-12-14  
6<sup>th</sup> Geo

- ① If the radius of a circle doubles, what happens to the area?

$$A = \pi \cdot r^2$$

Now

$$A = \pi (2 \cdot r)^2$$

Doubled  $= \pi \cdot \boxed{4} r^2$

- ② The ratio of the radii of 2 circles is 2:5. What will be the ratio of the areas?

4:25

The radius of a circle is decreased by 20%. How much does the area decrease by?

$$A = \pi r^2$$

Now

$$A = \pi (.8r)^2$$
$$= \underline{.64 \pi r^2}$$

kept 64%.

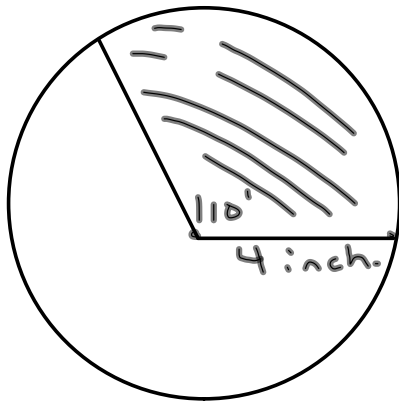
$\therefore$  decreased by 36%.

The ratio of two spheres' volumes is 125:512. What is the ratio of their radii?

$$5:8$$

The ratio of the areas of 2 circles is 16:36. What is the ratio of their radii?

$$4:6 = 2:3$$



Fractional part of Total Area

$$\frac{110}{360} \cdot \pi \cdot 4^2 \approx 15 \text{ in}^2$$