

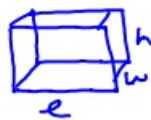
3-5-19 5<sup>th</sup> Geo

- ① The ratio of the radii of two cylinders is 4:5. What will the ratio of their volumes be?

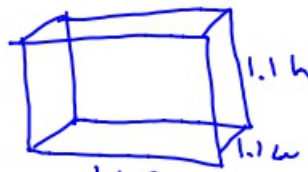
$$V = \pi r^2 h$$

16:25

- ② How much does the volume of a prism increase by if you make all sides 10% longer?



$$lwh$$

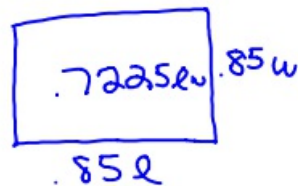
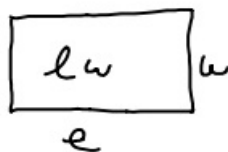


$$1.1l$$

$$1.331lwh$$

33.1% increase

- ③ I don't have enough seeds to fill my flower bed, so I figured out I had to decrease my length and width by 15%. How much did this decrease the area by?



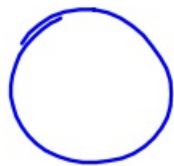
27.75% decrease

- ④ The ratio of the volumes of two spheres is 8:27. What is the ratio of their radii?

$$\sqrt[3]{8:27}$$

$$2:3$$

- ⑤ If the radius of a circle is increased by 50%, how much is the area increased by?

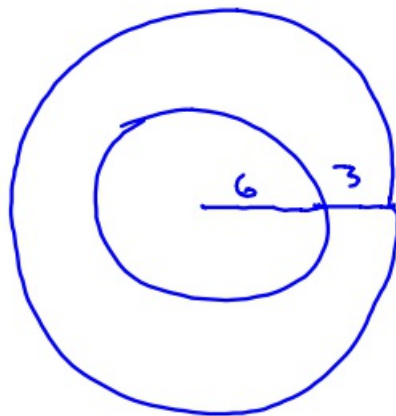


$$\pi r^2$$

$$\pi \cdot (1.5r)^2$$

$$\pi \cdot 2.25 r^2$$

125% larger



3-5-19 6<sup>th</sup> Geo

- ① How much does the volume of a cylinder change if its radius is doubled?



$$V = \pi r^2 h$$

$$V = \pi (2r)^2 h$$

$$\pi \cdot 4r^2 h$$

4 times larger

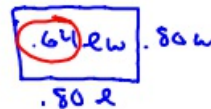
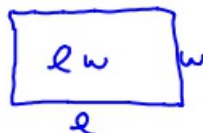
- ② The ratio of the radii of two spheres is 1:5. What is the ratio of their volumes?

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

$$(1:5)^3$$

$$1:125$$

- ③ I don't have enough seeds for my <sup>rectangular</sup> garden, so I will decrease the length and width by 20%. What does this do to the area?



64% is left, you  
lost 36%

Decrease of 36%.

- ④ The ratio of the volumes of 2 spheres is 8:125. What is the ratio of their radii?

$$\sqrt[3]{8:125}$$

$$2:5$$

- ⑤ A circle's radius is increased by 50%. How much larger is its area?

Know  
the  
formula →

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

← used in  
calculations

$$A = \pi \cdot (1.5r)^2$$

$$\pi \cdot 2.25 r^2$$

125%  
larger

