

Chapter 11 Test Review

What is the radius of a circle whose circumference is 75 miles (round your answer to the nearest tenth of a mile).

$$C = 2\pi r$$

$$\frac{75 \text{ mi}}{2\pi} = \frac{2\pi r}{2\pi}$$

$$11.937 \text{ mi} = r$$

$$\boxed{11.9 \text{ mi} = r}$$

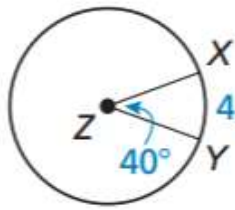
$$75 \div (2\pi)$$

$$\frac{75}{2} \cdot \pi$$

What is the circumference of circle Z? (round your answer to the nearest hundredth of an inch)

$$\frac{\text{Part}}{\dots} = \frac{\text{Part}}{\dots}$$

the nearest hundredth of an inch)



$$\frac{4.19 \text{ in}}{C} = \frac{40^\circ}{360^\circ}$$

$$C = (4.19 \text{ in}) 9$$

$$C = 37.71 \text{ in}$$

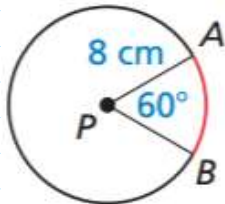
$$\frac{\text{Part}}{\text{whole}} = \frac{\text{Part}}{\text{whole}}$$

works for \widehat{AB}

$\ell \widehat{AB}$

area of a sector

Find the arc length of arc AB. (round your answer to the nearest tenth of a cm)



$$\ell \widehat{AB} = X$$

$$\frac{X}{50.265 \text{ cm}} = \frac{60^\circ}{360^\circ}$$

$$\frac{\text{Part}}{\text{whole}} = \frac{\text{Part}}{\text{whole}}$$

$$C = 2\pi r$$

$$2\pi (8 \text{ cm})$$

$$50.265 \text{ cm}$$

$$\frac{X}{50.265 \text{ cm}} = \frac{60^\circ}{360^\circ}$$

$$X = 8.378 \text{ cm}$$

$$\ell \widehat{AB} = 8.4 \text{ cm}$$

Convert 45° to radians.

deg/rad (1)

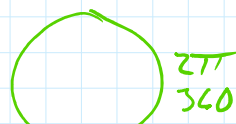
$$1 = \frac{180^\circ}{\pi}$$

or

$$\frac{\pi}{180^\circ}$$

$$45^\circ \cdot 1$$

$$45^\circ \cdot \frac{\pi}{180^\circ}$$

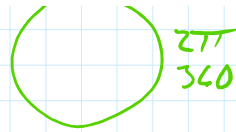


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$$\frac{45}{1} \cdot \frac{\pi}{180^\circ}$$

$$\frac{45\pi}{180}$$

$$\frac{\pi}{4}$$



$$\frac{\pi}{180^\circ} = 1 = \frac{180^\circ}{\pi}$$

Put what you want on top

Convert $\frac{3\pi}{2}$ radians to degrees.

$$\frac{3\pi}{2} \cdot \frac{180^\circ}{\pi}$$

$$270^\circ$$

$$\frac{3\pi}{2} \cdot \frac{180^\circ}{\pi}$$

$$\frac{\pi}{180^\circ} = \frac{180^\circ}{\pi}$$

Find the diameter of a circle with an area of 113.1 square centimeters. (round your answer to the nearest tenth of a unit)

$$113.1 \text{ cm}^2 = \frac{\pi r^2}{\pi}$$

$$A = \pi r^2$$

$$\frac{113.1 \text{ cm}^2}{\pi} = \pi r^2$$

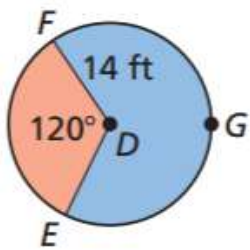
$$\sqrt{36 \text{ cm}^2} = \sqrt{\pi r^2}$$

$$6 \text{ cm} = r$$

$$\pi = 3.14$$

$$\text{Diameter} = 12 \text{ cm}$$

Find the area of the red sector. (round your answer to the nearest tenth of a unit)



$$\frac{X}{615.75 \text{ ft}^2} = \frac{120^\circ}{360^\circ}$$

$$\frac{\text{Part}}{\text{Whole}} = \frac{\text{Part}}{\text{Whole}}$$

$$\frac{X}{615.75 \text{ ft}^2} = \frac{1}{3}$$

$$X = 205.25 \text{ ft}^2$$

$$A = \pi r^2$$

$$\pi (14 \text{ ft})^2$$

$$\pi 196 \text{ ft}^2$$

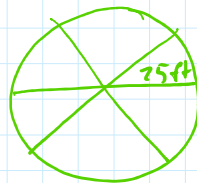
$$A = 615.75 \text{ ft}^2$$

You are planting a circular garden full of different color pansies. You plan to plant six different colors of flowers covering equal areas. The garden has a radius of 25 feet. How many square feet of space will each color cover? (leave your answer in terms of π)

$$A = \pi r^2$$

$$\pi (25 \text{ ft})^2$$

$$\pi 625 \text{ ft}^2$$



$$625$$

$$\pi(25ft)$$

$$A = \pi(25ft)^2$$

$$A = 625\pi ft^2$$

$$\frac{625}{6}$$

$$104.167 ft^2$$

$$104.2\pi ft^2$$

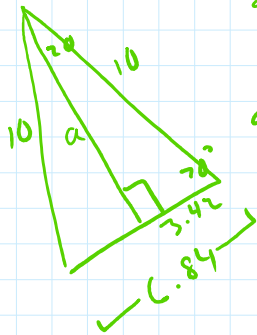
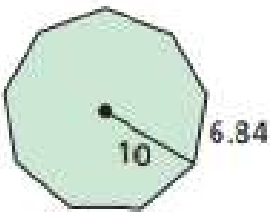
Find the area of the regular nonagon.

9

$$A = \frac{1}{2}Pa$$

$$\frac{1}{2}(61.56)(9.4)$$

$$A = 289.332$$



$$a^2 + b^2 = c^2$$

$$a^2 + 3.42^2 = 10^2$$

$$a^2 + 11.6964 = 100$$

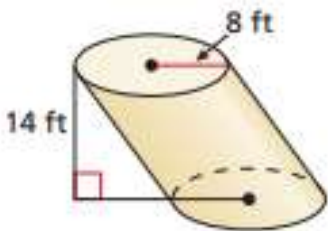
$$\sqrt{a^2} = \sqrt{88.3036}$$

$$a = 9.4$$

$$P = 9(6.84)$$

$$P = 61.56$$

Find the volume of the solid.



$$V = Bh$$

$$(201.1 ft^2)(14 ft)$$

$$V = 2815.4 ft^3$$

$$B = \pi r^2$$

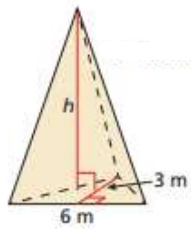
$$\pi(8ft)^2$$

$$\pi(4ft)^2$$

$$D = 201.1$$

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Find the volume of the pyramid.



$$h = \frac{8}{3}$$

$$V = \frac{1}{3} B h$$

$$\frac{1}{3} (9m^2) \left(\frac{8}{3}m\right)$$

$$(3m^2) \frac{8}{3}m$$

$$V = 8m^3$$

$$B = \frac{1}{2} bh$$

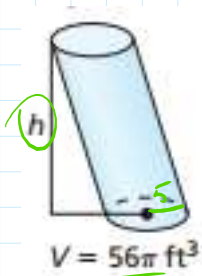
$$\frac{1}{2} (6)(3)$$

$$(3)(3)$$

$$B = 9m^2$$

r

Given the volume, find the missing measure.



$$B = \pi r^2$$

$$\pi(5ft)^2$$

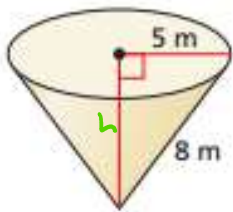
$$25\pi ft^2$$

$$V = B h$$

$$\frac{56\pi ft^3}{25\pi ft^2} = \frac{25\pi ft^2 h}{25\pi ft^2}$$

$$2.24ft = h$$

Find the volume and surface area of the following shape.



$$V = \frac{1}{3} Bh$$

$$\frac{1}{3} (78.5 \text{ m}^2) (6.2 \text{ m})$$

$$V = 162.2 \text{ m}^3$$

$$S = \pi r^2 + \pi r l$$

$$78.5 \text{ m}^2 + \pi (5 \text{ m}) (8 \text{ m})$$

$$\pi 40 \text{ m}^2$$

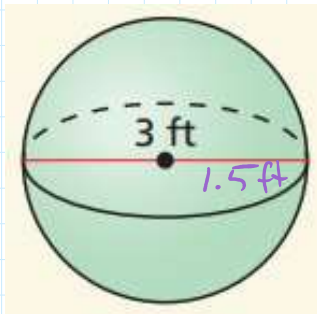
$$78.5 \text{ m}^2 + 125.7 \text{ m}^2$$

$$S = 204.2 \text{ m}^2$$

$$\begin{aligned} S &= \pi r^2 \\ \pi (5 \text{ m})^2 \\ \pi (25 \text{ m}^2) \\ 78.5 \text{ m}^2 \end{aligned}$$

$$\begin{aligned} a^2 + b^2 &= c^2 \\ h^2 + 5^2 &= 8^2 \\ h^2 + 25 &= 64 \\ -25 & -25 \\ \sqrt{h^2} &= \sqrt{39} \\ h &= 6.2 \end{aligned}$$

Find the volume and surface area of the shape. Leave in terms of π



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

$$\frac{4}{3} \pi (1.5 \text{ ft})^3$$

$$\frac{4}{3} \pi (3.375 \text{ ft}^3)$$

$$\begin{aligned} 4.5 \pi \text{ ft}^3 \\ 14.14 \text{ ft}^3 \end{aligned}$$

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

$$4 \pi (1.5 \text{ ft})^2$$

$$4 \pi (2.25 \text{ ft}^2)$$

$$\begin{aligned} 9 \pi \text{ ft}^2 \\ 28.27 \text{ ft}^2 \end{aligned}$$

1 sheet of notes allowed.
Practice *sec 11 Review* pg.
656: 1-7EO, 11-37EO
