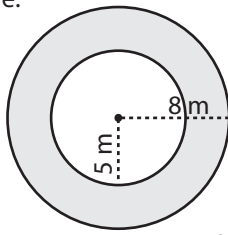


Concentric Circle - Area

Example:



Area = ?

$$\text{Area of shaded region} = (\text{Area of outer circle}) - (\text{Area of inner circle})$$

$$= \pi R^2 - \pi r^2$$

$$= \pi (R^2 - r^2)$$

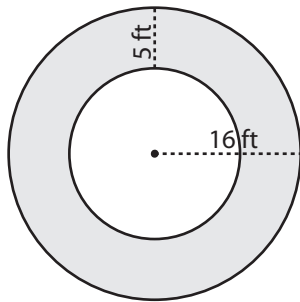
$$= \pi (8^2 - 5^2)$$

$$= \pi (64 - 25)$$

$$= \mathbf{39\pi \text{ m}^2}$$

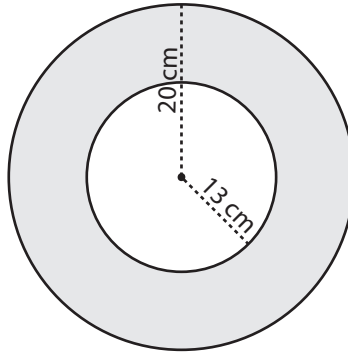
Find the exact area of each shaded region.

1)



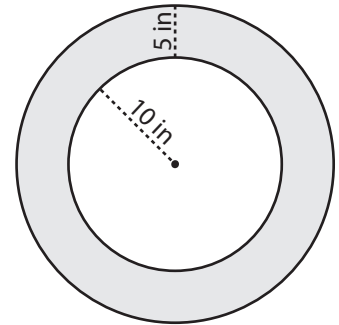
Area =

2)



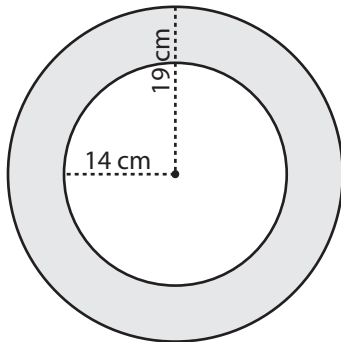
Area =

3)



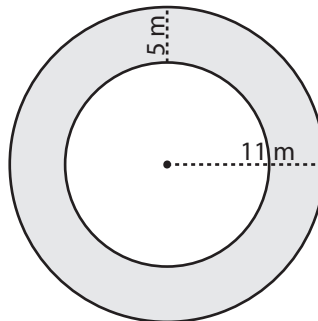
Area =

4)



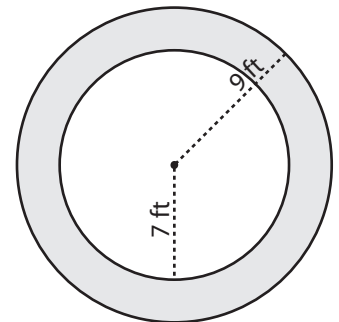
Area =

5)



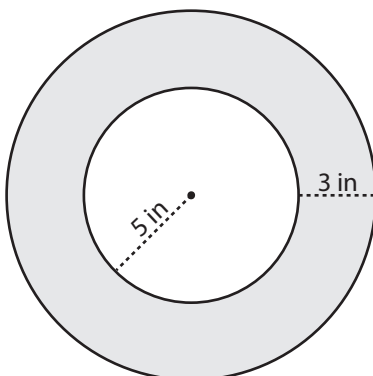
Area =

6)



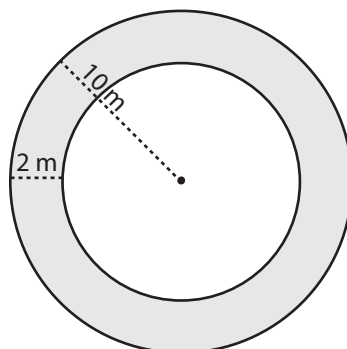
Area =

7)



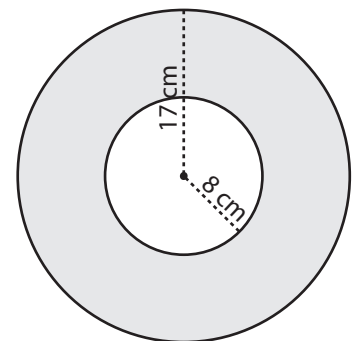
Area =

8)



Area =

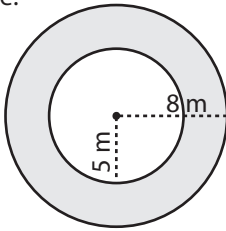
9)



Area =

Answer Key

Example:



Area = ?

Area of shaded region = (Area of outer circle) - (Area of inner circle)

$$= \pi R^2 - \pi r^2$$

$$= \pi (R^2 - r^2)$$

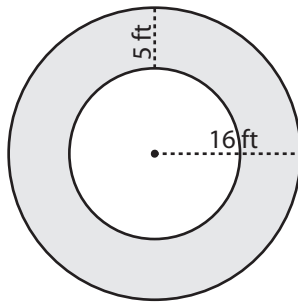
$$= \pi (8^2 - 5^2)$$

$$= \pi (64 - 25)$$

$$= \mathbf{39\pi \text{ m}^2}$$

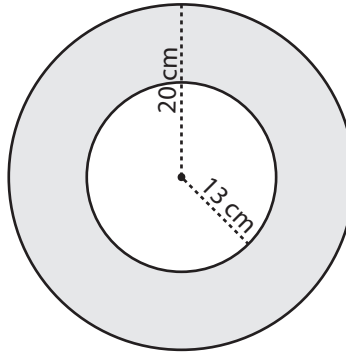
Find the exact area of each shaded region.

1)



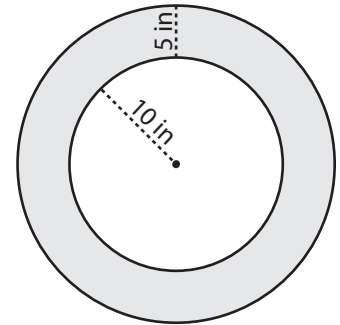
Area = $\mathbf{135\pi \text{ ft}^2}$

2)



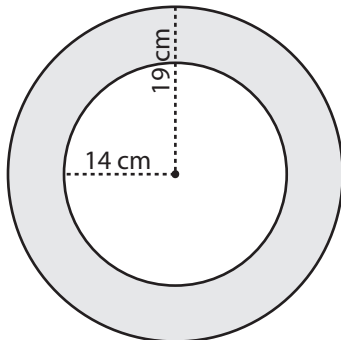
Area = $\mathbf{231\pi \text{ cm}^2}$

3)



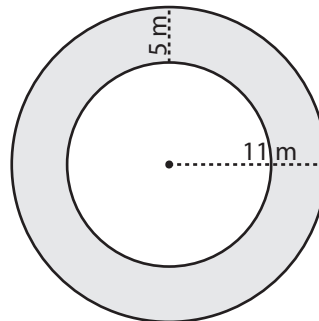
Area = $\mathbf{125\pi \text{ in}^2}$

4)



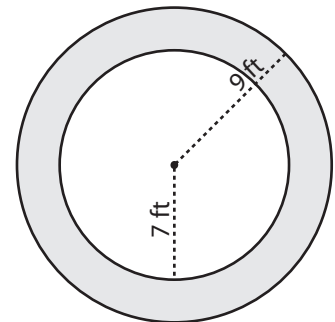
Area = $\mathbf{165\pi \text{ cm}^2}$

5)



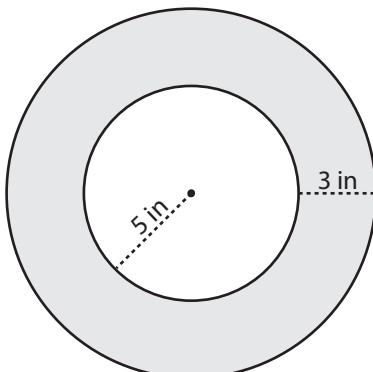
Area = $\mathbf{85\pi \text{ m}^2}$

6)



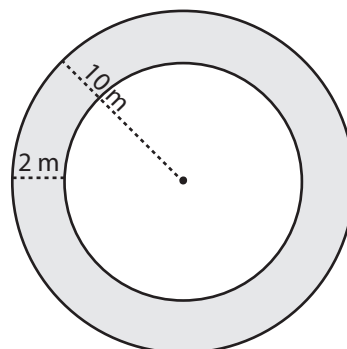
Area = $\mathbf{32\pi \text{ ft}^2}$

7)



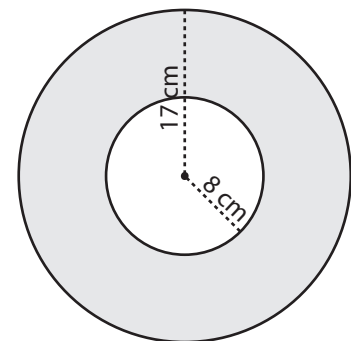
Area = $\mathbf{39\pi \text{ in}^2}$

8)



Area = $\mathbf{36\pi \text{ m}^2}$

9)



Area = $\mathbf{225\pi \text{ cm}^2}$