



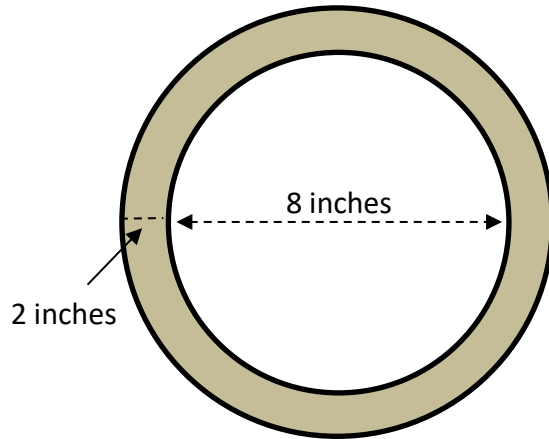
## AREA OF A CIRCLE WORD PROBLEMS 3A

Work out these area word problems giving your answers to 1 decimal place.

Working out

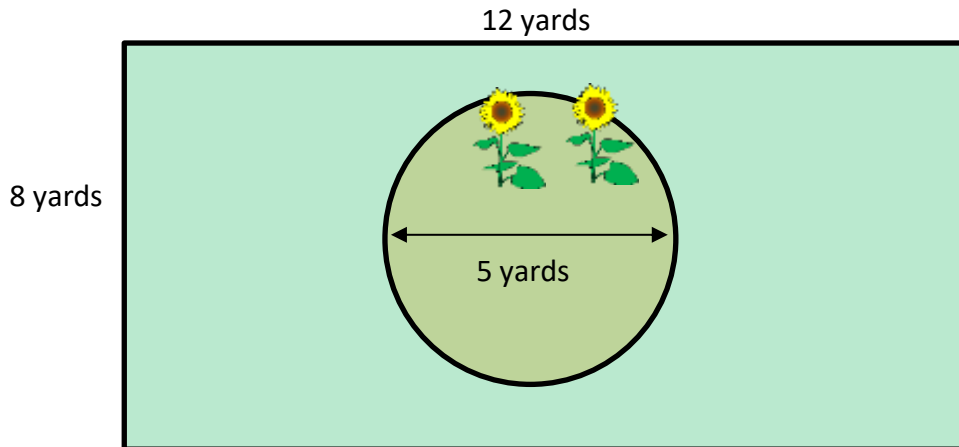
- 1) A circular mirror has a 2 inch frame around it.  
The mirror itself is 8 inches in diameter.  
What is the area of the frame?

Area of mirror is



The area of the frame is \_\_\_\_\_.

- 2) A circular flower bed 5 yards in diameter is created in the middle of a rectangular lawn area measuring 15 yards by 8 yards.  
What is the area of the lawn that is left?



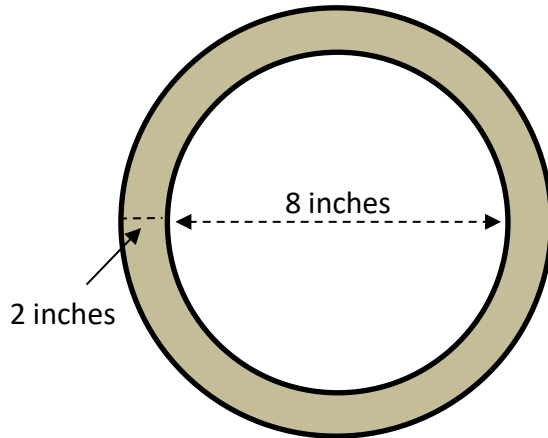
The area of lawn is \_\_\_\_\_.



## AREA OF A CIRCLE WORD PROBLEMS 3A ANSWERS

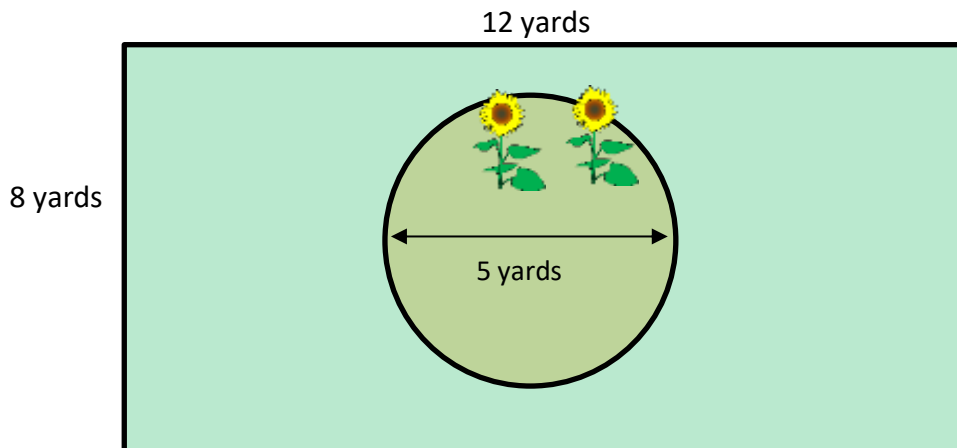
Work out these area word problems giving your answers to 1 decimal place.

- 1) A circular mirror has a 2 inch frame around it. The mirror itself is 8 inches in diameter. What is the area of the frame?



The area of the frame is 28.3 square inches

- 2) A circular flower bed 5 yards in diameter is created in the middle of a rectangular lawn area measuring 15 yards by 8 yards. What is the area of the lawn that is left?



The area of lawn is 76.4 square yards.

### Working out

$$\text{Radius of mirror} = 8 \div 2 = 4 \text{ inches}$$

$$\text{Area of mirror is } \pi r^2 \text{ which is } \pi \times 4^2 = 16\pi.$$

$$\text{Radius of mirror and frame} = 10 \div 2 = 5 \text{ inches}$$

$$\text{Area of mirror and frame} = \pi \times 5^2 = 25\pi.$$

$$\text{Area of frame} = \text{area of mirror and frame} - \text{area of mirror.}$$

$$\text{Area of frame} = 25\pi - 16\pi = 9\pi = 28.3 \text{ in}^2$$

$$\text{Area of lawn and flower bed} = 12 \times 8 = 96 \text{ square yards.}$$

$$\text{Radius of bed} = 5 \div 2 = 2.5 \text{ yards.}$$

$$\text{Area of flower bed} = \pi r^2 = \pi \times 2.5^2 = 19.6 \text{ square yards.}$$

$$\begin{aligned} \text{Area of lawn} &= \text{area of lawn and bed} - \text{area of bed} \\ &= 96 - 19.6 = 76.4 \text{ square yards.} \end{aligned}$$