

Name _____

Date _____

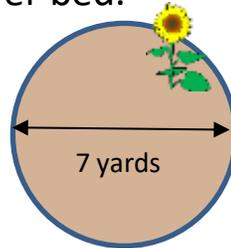


AREA OF A CIRCLE WORD PROBLEMS 2A

Work out these area word problems – give your answers to 1 decimal place where appropriate.

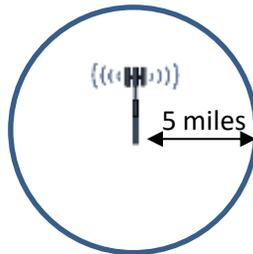
Working out

- 1) A circular flower bed has a diameter of 7 yards.
Work out the area of the flower bed.



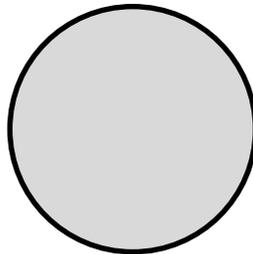
Area of the flower bed is _____ square yards.

- 2) A cell phone mast has a range of 5 miles in all directions. Work out the area covered by one mast.



Area covered by the mast is _____ .

- 3) A circular mirror has an area of 144π square inches.
What is the diameter of the mirror?

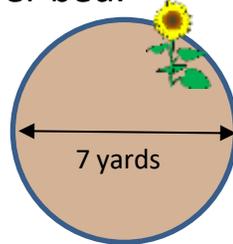


The diameter of the mirror is _____ inches.



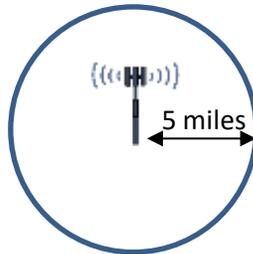
AREA OF A CIRCLE WORD PROBLEMS 2A ANSWERS

- 1) A circular flower bed has a diameter of 7 yards.
Work out the area of the flower bed.



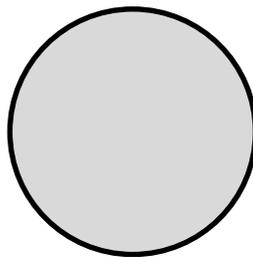
Area of the flower bed is 38.5 square yards.

- 2) A cell phone mast has a range of 5 miles in all directions. Work out the area covered by one mast.



Area covered by the mast is 78.5 square miles.

- 3) A circular mirror has an area of 144π square inches.
What is the diameter of the mirror?



The diameter of the mirror is 24 inches.

Working out

$$\begin{aligned} \text{Radius} &= \text{Diameter} \div 2 \\ &= 7 \div 2 = 3.5 \text{ yards} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \pi r^2 = \pi \times 3.5^2 \\ &= \pi \times 12.25 = 38.5 \\ &\text{square yards} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \pi r^2 = \pi \times 5^2 \\ &= \pi \times 25 = 78.5 \text{ square} \\ &\text{miles} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \pi r^2 = 144\pi \\ \text{If we divide both} \\ \text{sides of the equation} \\ \text{by } \pi, \text{ we get} \\ r^2 &= 144 \\ \text{So } r &= \sqrt{144} = 12 \\ \text{If the radius is 12} \\ \text{inches, then the} \\ \text{diameter must be} \\ \text{double this which is} \\ &24 \text{ inches.} \end{aligned}$$