

Name

Date

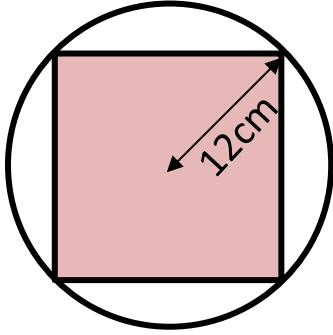


AREA OF A SQUARE INSCRIBED BY A CIRCLE 2

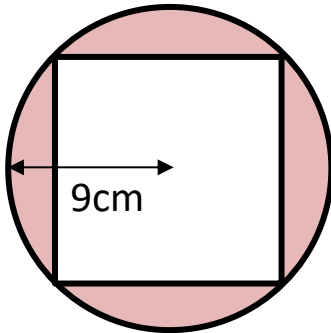
Find the area of the shaded parts of each diagram.

Give your answer to 1dp where appropriate.

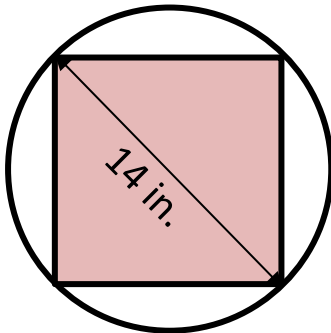
1)



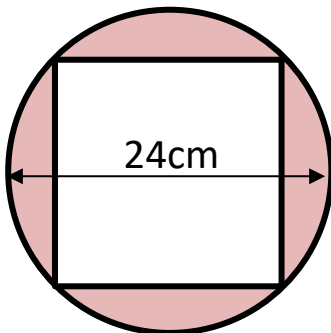
2)



3)



4)



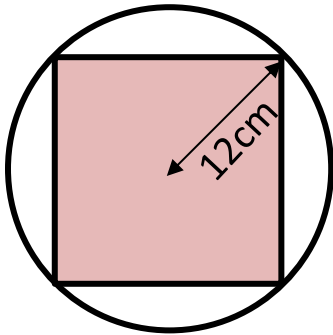


AREA OF A SQUARE INSCRIBED BY A CIRCLE 2 ANSWERS

Find the area of the shaded parts of each diagram.

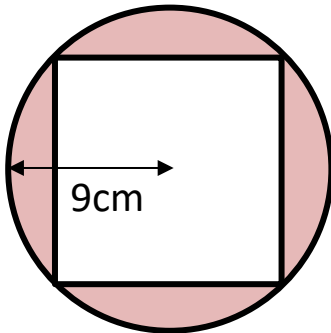
Give your answer to 1dp where appropriate.

1)



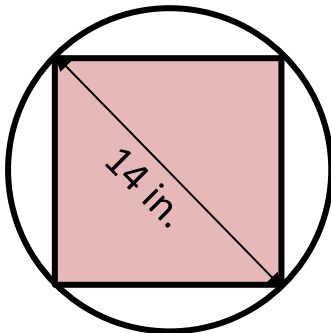
$$\begin{aligned} \text{Area of square} &= 2r^2 = 2 \times (12)^2 = 2 \times 144 \\ &= \underline{288 \text{ cm}^2} \end{aligned}$$

2)



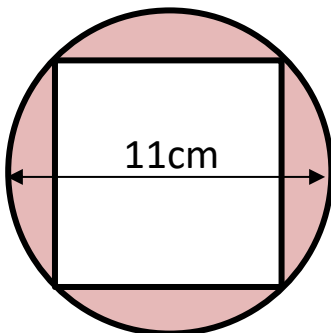
$$\begin{aligned} \text{Area of square} &= 2r^2 = 2 \times (9)^2 = 2 \times 81 = 162 \text{ cm}^2 \\ \text{Area of circle} &= \pi r^2 = \pi \times 9^2 = 81\pi = 254.5 \text{ cm}^2 \\ \text{Area of shaded region} &= \text{area of circle} - \text{area of square} \\ &= 254.5 - 162 \text{ cm}^2 = \underline{92.5 \text{ cm}^2} \text{ (to 1dp)} \end{aligned}$$

3)



$$\begin{aligned} \text{Diameter} &= 14 \text{ in, so radius} = 14 \div 2 = 7 \text{ in.} \\ \text{Area of square} &= 2r^2 = 2 \times (7)^2 = 2 \times 49 = \underline{98 \text{ cm}^2} \end{aligned}$$

4)



$$\begin{aligned} \text{Diameter} &= 11 \text{ cm, so radius} = 11 \div 2 = 5.5 \text{ cm.} \\ \text{Area of square} &= 2r^2 = 2 \times (5.5)^2 = 2 \times 30.25 = 60.5 \text{ cm}^2 \\ \text{Area of circle} &= \pi r^2 = \pi \times 5.5^2 = 30.25 \pi = 95.0 \text{ cm}^2 \text{ (to 1dp)} \\ \text{Area of shaded region} &= 95.0 - 60.5 = \underline{34.5 \text{ cm}^2} \end{aligned}$$