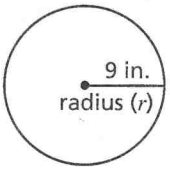
Name _____

Explore Area of Circles

12-7 RETEACH

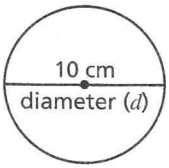
You can use a formula to find the area of a circle.

When you are given the radius of the circle, use the formula $A = \pi r^2$, where A = area and r = radius. The value of π is approximately 3.14.



$A = \pi r^2$
$A = 3.14 \times 9^2$
$A = 3.14 \times 81$
$A = 254.34$ in.^{2}, or about 254.3 in.^{2}

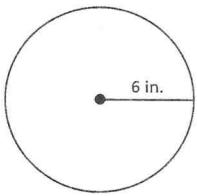
When you are given the diameter of the circle, first divide it by 2 because the radius is half the diameter. Then use the formula.



The diameter is 10 cm, so the radius, r, is 5 cm.
$A = \pi r^2$
$A = 3.14 \times 5^2$
$A = 3.14 \times 25$
$A = 78.5$ cm^2

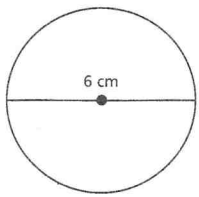
Find the area of each circle. Round to the nearest tenth, if necessary.

1.



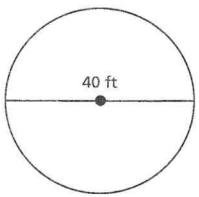
$r =$ _____ in.
$A = \pi r^2$
$A =$ _____ $\times$ _____
$A =$ _____ $\times$ _____
$A =$ _____ in.^{2}

2.



$r =$ _____ cm
$A = \pi r^2$
$A =$ _____ $\times$ _____
$A =$ _____ $\times$ _____
$A =$ _____ cm^2

3.



$r =$ _____ ft
$A = \pi r^2$
$A =$ _____ $\times$ _____
$A =$ _____ $\times$ _____
$A =$ _____ ft^2

© McGraw-Hill School Division