Name: ....   Class: ....
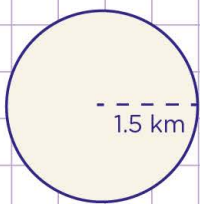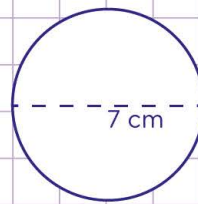
Circles: calculate area, circumference, radius, and diameter.

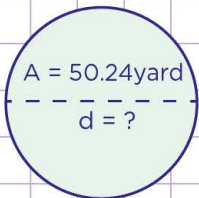**1.** The radius of a circle is 2 km.
Find the area of the circle.

$\pi = 3.14$

1.5 km

2. The area of the circle is 50.24 square yards
What is the diameter of the circle?

$\pi = 3.14$

A = 50.24yard

d = ?

3. The diameter of the circle is 7 cm.
a) Find the radius of the circle.

$\pi = 3.14$

7 cm

b) Find the circumference of the circle.

$\pi = 3.14$

6.6 cm

Math-wordproblems.com
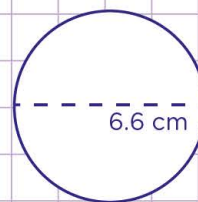
Name: .... Class: ....

Circles: calculate area, circumference, radius, and diameter.

Area of a circle = πr^2

**1.** The radius of a circle is 2 km.
Find the area of the circle.
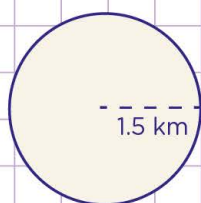
1.5 km

$\pi = 3.14$
$r = 1.5$ km
Area of a circle = πr^2

Substitude the numbers and solve.
Area = $3.14 \times (1.5 \text{ km})^2$
$3.14 \times 2.25 \text{ km}^2 = 7.065 \text{ km}^2$

So, the area is 7.065 km².

3. The diameter of the circle is 7 cm.
a) Find the radius of the circle.

7 cm

$\pi = 3.14$
$r = ?$
diameter = 7 cm

Find the radius given the diameter.
$d = 2 \times r$
$7 = 2 \times r$
$r = 7/2 = 3.5$ cm

So, the radius is 3.5 cm.

2. The area of the circle is 50.24 square yards.
What is the diameter of the circle?
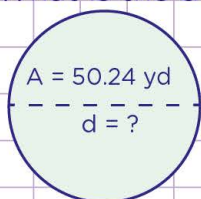
A = 50.24 yd
d = ?

$\pi = 3.14$
radius = ?
diameter = ?
Let's first find the radius.

Area = πr^2 make r the subject

So, $r = \sqrt{\dfrac{\text{area}}{\pi}} \longrightarrow \sqrt{\dfrac{50.24}{3.14}} \longrightarrow \sqrt{16}$

So, r = 4

Now, find the diameter (d).
$d = 2r$
$d = 2 \times 4$
$d = 8$ yards

So, the diameter is 8 yards.

b) Find the circumference of the circle.

9 cm
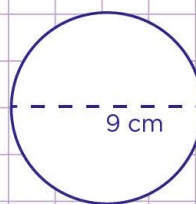
$\pi = 3.14$
$r = 3$
diameter = 9 cm
Circumference (c) = $2\pi r$

Now substitute the values in to the formula.
$C = 2(3.14)(3)$
$C = (6.28)(3)$
$C = 18.84$

So, the circumference is 18.84.