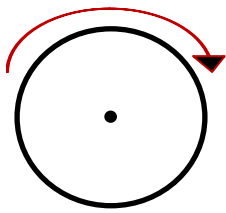
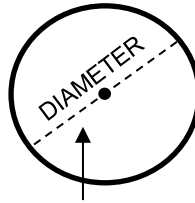


CIRCLES - CIRCUMFERENCE

ANSWERS



THE **CIRCUMFERENCE** OF A CIRCLE IS THE DISTANCE AROUND IT. IT'S THE SAME AS THE PERIMETER BUT FOR CIRCLES.



THE **DIAMETER** OF A CIRCLE IS THE DISTANCE OF A LINE SEGMENT THAT CONNECTS TWO POINTS ON THE CIRCLE AND PASSES THROUGH THE CENTER.

THE DISTANCE ACROSS THE MIDDLE.

A VERY LONG TIME AGO, PEOPLE OBSERVED THAT CIRCLES OF DIFFERENT SIZES WERE SIMILAR. IF YOU MEASURE THE **CIRCUMFERENCE** OF ANY CIRCLE AND DIVIDE IT BY THE **DIAMETER** OF THE SAME CIRCLE, YOU WILL ALWAYS GET THE SAME ANSWER. THEY CALLED THIS NUMBER "PI" AND USED π AS A SYMBOL.

$$\text{Circumference} \div \text{Diameter} = \pi$$

or

$$\text{Circumference} = \text{Diameter} \times \pi$$

or

$$\text{Diameter} = \text{Circumference} \div \pi$$

$$\pi = 3.141592653589\dots$$

π ALWAYS EQUALS THIS NUMBER.

YOU CAN APPROXIMATE π TO 3.14 TO MAKE YOUR LIFE EASIER, BUT YOUR ANSWER WILL NOT BE EXACT. IT WILL BE A GOOD ESTIMATE.

Helpful Examples

a. Circumference \div Diameter = π
 Circumference \div 9 in = 3.14

NOW SOLVE FOR THE CIRCUMFERENCE.

Circumference = 9 x 3.14
 Circumference = **28.26**

b. Circumference \div Diameter = π
 15.7 m \div Diameter = 3.14

NOW SOLVE FOR THE DIAMETER.

Diameter = 15.7 \div 3.14
 Diameter = **5**

Now your turn. Find the missing Circumference or Diameter for each circle.

1. Diameter = 15 cm

Circumference = 47.1 cm

2. Circumference = 314 feet

Diameter = 100 feet

3. Diameter = 30 yd

Circumference = 94.2 yd

4. Circumference = 25.12 km

Diameter = 8 km

5. D = 41 miles

Circumference = 128.74 miles

6. C = 6.28 mm

Diameter = 2 mm