

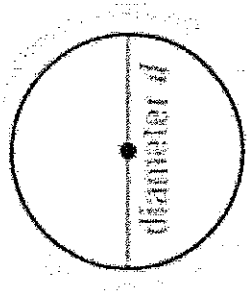
Circumference:

The circumference of a circle is the distance around the circle. For all circles, the ratio of the circumference to the diameter is the same. The ratio is known as π .

Circumference is calculated as follows:

$$C = 2\pi r$$

$$C = \pi d$$



circumference C

Circumference:

Find the Circumference of the following:

- $$C = 2\pi r$$

$$C = 2\pi(6)$$

$$C = (12\pi) \text{ cm}$$

or

$$37.699 \text{ cm}$$
- Find the circumference of a circle with a diameter of 10 feet.

$$d = 10$$

$$C = \pi d$$

$$C = \pi(10)$$

$$C = (10\pi) \text{ ft}$$

or

$$31.416 \text{ ft}$$
- $$C = 2\pi r$$

$$C = \pi(14)$$

$$C = (14\pi) \text{ in}$$

or

$$43.982 \text{ in}$$
- Find the circumference of a circle with a radius of 12 meters.

$$r = 12$$

$$C = 2\pi r$$

$$C = 2\pi(12)$$

$$C = (24\pi) \text{ m}$$

or

$$75.398 \text{ m}$$

Circumference: You Practice:

Find the Circumference of the following:

- $$C = 2\pi r$$

$$C = 2\pi(17)$$

$$C = (34\pi) \text{ cm}$$

or

$$106.814 \text{ cm}$$
- $$C = \pi d$$

$$C = \pi(16)$$

$$C = (16\pi) \text{ ft}$$

or

$$50.265 \text{ ft}$$
- $$C = 2\pi r$$

$$C = 2\pi(14)$$

$$C = (28\pi) \text{ yd}$$

or

$$87.965 \text{ yd}$$
- $$C = \pi d$$

$$C = \pi(18)$$

$$C = (18\pi) \text{ in}$$

or

$$56.549 \text{ in}$$
- $$C = 2\pi r$$

$$C = \pi d$$

$$C = \pi(16)$$

$$C = (16\pi) \text{ ft}$$

or

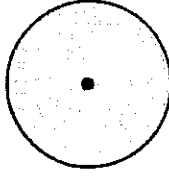
$$50.265 \text{ ft}$$

Area of a Circle:

The area of a circle is the number of square units that covers the surface of the area.

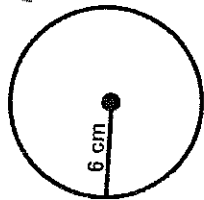
Area is calculated as follows:

$$A = \pi r^2$$



Area of a Circle:

Find the Area of the following:



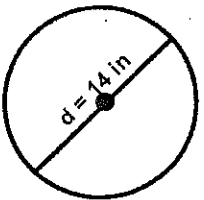
$$A = \pi r^2$$

$$A = \pi(6)^2$$

$$A = 36\pi \text{ cm}^2$$

or

$$113.097 \text{ cm}^2$$



$$A = \pi r^2$$

$$A = \pi(7)^2$$

$$A = 49\pi \text{ in}^2$$

or

$$153.938 \text{ in}^2$$

2. Find the Area of a circle with a diameter of 10 feet. $d = 10$

$$A = \pi r^2$$

$$A = \pi(5)^2$$

$$A = 25\pi \text{ ft}^2$$

or

$$78.54 \text{ ft}^2$$

3. Find the Area of a circle with a radius of 12 meters. $r = 12$

$$A = \pi r^2$$

$$A = \pi(12)^2$$

$$A = 144\pi \text{ m}^2$$

or

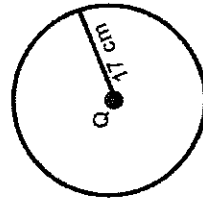
$$452.389 \text{ m}^2$$

$$C = 2\pi r$$

$$C = \pi d$$

Area of a Circle: You Practice:

Find the Area of the following:



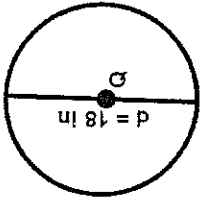
$$A = \pi r^2$$

$$A = \pi(11)^2$$

$$A = 289\pi \text{ cm}^2$$

or

$$907.92 \text{ cm}^2$$



$$A = \pi r^2$$

$$A = \pi(9)^2$$

$$A = 81\pi \text{ in}^2$$

or

$$254.469 \text{ in}^2$$

5. Find the Area of a circle with a radius of 14 yards. $r = 14$

$$A = \pi r^2$$

$$A = \pi(14)^2$$

$$A = 196\pi \text{ yd}^2$$

or

$$615.752 \text{ yd}^2$$

6. Find the Area of a circle with a diameter of 16 feet. $d = 16$

$$A = \pi r^2$$

$$A = \pi(8)^2$$

$$A = 64\pi \text{ ft}^2$$

or

$$201.062 \text{ ft}^2$$

Using Area and Circumference:

Use the given Area to find the requested information:

1. The Area is 104 in^2 .
What is the circle's radius?

$$A = \pi r^2$$

$$104 = \pi r^2$$

$$\frac{104}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{33.104} = \sqrt{r^2}$$

$$5.754 = r$$

2. The Area is 84 ft^2 .
What is the circle's radius?

$$A = \pi r^2$$

$$84 = \pi r^2$$

$$\frac{84}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{26.738} = \sqrt{r^2}$$

$$5.171 = r$$

3. The Area is 96 cm^2 .
What is the circle's diameter?

$$A = \pi r^2$$

$$96 = \pi r^2$$

$$\frac{96}{\pi} = \frac{\pi r^2}{\pi}$$

$$30.558 = r^2$$

$$5.528 = r$$

x 2

$$d = 11.056 \text{ cm}$$

4. The Area is 48 in^2 .
What is the circle's diameter?

$$A = \pi r^2$$

$$48 = \pi r^2$$

$$\frac{48}{\pi} = \frac{\pi r^2}{\pi}$$

$$15.279 = r^2$$

$$3.909 = r$$

x 2

$$d = 7.818 \text{ in}$$

Using Area and Circumference:

Use the given to find the requested information:

1. The Area is 201 ft^2 .
What is the circle's circumference?

$$A = \pi r^2$$

$$201 = \pi r^2$$

$$\frac{201}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{63.98} = \sqrt{r^2}$$

$$8 = r$$

$$C = 2\pi r$$

$$C = 2\pi(8)$$

$$C = 16\pi \text{ ft}$$

or

$$50.265 \text{ ft}$$

2. The Circumference is 31.4 m .
What is the circle's Area?

$$C = 2\pi r$$

$$\frac{31.4}{2\pi} = \frac{2\pi r}{2\pi}$$

$$5 = r$$

$$A = \pi r^2$$

$$A = \pi(5)^2$$

$$A = 25\pi \text{ m}^2$$

or

$$78.54 \text{ m}^2$$

3. The Area is 79 cm^2 .
What is the circle's circumference?

$$A = \pi r^2$$

$$79 = \pi r^2$$

$$\frac{79}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{25.146} = \sqrt{r^2}$$

$$5.015 = r$$

$$C = 2\pi r$$

$$C = 2\pi(5.015)$$

$$C = 31.51 \text{ cm}$$

4. The Circumference is 113 in .
What is the circle's Area?

$$C = 2\pi r$$

$$\frac{113}{2\pi} = \frac{2\pi r}{2\pi}$$

$$17.985 = r$$

$$A = \pi r^2$$

$$A = \pi(17.985)^2$$

$$A = 1016.125 \text{ in}^2$$