

Circle Geometrically, a circle is all points that are the same distance from one point.
Radius The radius is the distance from the center of the circle to the outside. We also saw that a radius is a line segment from the center of a circle to the outside of the circle.
Diameter The diameter of a circle is the distance from one end to another, going through the center. The diameter of a circle is twice the radius. $D = 2r$
Circumference The circumference of a circle is the distance all the way around the circle. (if an ant walked the entire way around the circle.
Pi Pi (π) is a Greek letter used to understand circles. The circumference of a circle divided by the <i>diameter</i> is <i>always</i> equal to pi! This is represented by the formula $\pi = \frac{C}{D}$ or $C = 2\pi r$ <div style="text-align: right; color: red; font-size: 1.5em;">Text</div>
Pi to 20 digits: 3.1415926358979323846 (Memorize at least 8! It will not take you long.)
Area of a Circle The area of a circle is given by this formula: $A = \pi r^2$
Tangent A line <i>tangent to</i> a circle is a line that touches the circle in exactly one point (just barely grazes the outside of the circle). A tangent line and a radius that intersect are <i>always perpendicular</i> !

1. If a circle has a circumference of 500 meters, what is its diameter?
2. If a circle has a circumference of 20 meters, what is its diameter?
3. If a circle has a circumference of 10 meters, what is its radius?
4. If a circle has a circumference of 50 meters, what is its radius?
5. If a circle has a diameter of 60 meters, what is its circumference?
6. If a circle has a diameter of 90 meters, what is its circumference?
7. If a circle has a radius of 5 meters, what is its circumference?
8. If a circle has a radius of 9 meters, what is its circumference?
9. If a circle has a radius of 6 meters, what is its area?
10. If a circle has a radius of 17 meters, what is its area?

11. If a circle has a diameter of 23 meters, what is its area?
12. If a circle has a diameter of 39 meters, what is its area?
13. If a circle has a circumference of 40 meters, what is its area?
14. If a circle has a circumference of 3 meters, what is its area?
15. Write pi to 10 digits!!!

New potential question:
how long would it take the moon exploration vehicle
to drive the entire circumference of the moon?

ANSWERS

1. 159 meters

2. 6.4 meters

3. 1.6 meters

4. 8.0 meters [or 7.958 meters]

5. 188.5 meters

6. 283 meters

7. 31.4 meters

8. 56.5 meters

9. 113 m²

10. 908 m²

11. 415 m²

12. 1195 m²

13. 127.3

14. 0.716

15. 3.141592653