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The circumference of a circle represents

Lesson 4 Area and circumference of a circle   The length of thr black line forming the circle is called the circumference. It is shown by the symbol C. The diameter is the blue line shown above. It is a line drawn through the center of a circle and is shown by the symbol d The radius are the red lines shown above. The radius of a circle is the distance from the center to the edge of a circle. It is 1/2 of the diameter and is shown y the symbol r. If you measure the circumference and the diameter of a circle and divide the circumference by the diameter, you get the number Pi, which is about 3.14. Pi is often shown by the Greek letter π . The ancient Greeks used the symbol π to indicate the ratio between the circumference and diameter of a circle. If your calculator does not have the symbol π , you can use the rounded off number 3.14 for π . Some formulas that are good to know and understand. Symbol Name Formula π Pi d Diameter   and C Circumference r Radius A Area Some examples Example 1.   Find the diameter.   d = 2 � 3cm = 6cm Example 2.   Find the circumference.   C = d � pi = 6cm � 3.14 = 18.8 cm Example 3.   Find the diameter.   d= 18.8 � 3.14 = 6 cm Example 4.   The area of the circle is: A = 5m � 5m � 3.14 78.5m2 (Note: the symbol means about the same as). In the diagram above, the area of the small yellow square is a quarter of the area of the big square. If the area of the shaded square is A = 5m � 5m = 25m2 then the area of the big square is A = 4 � 25m2 =100m2 You can see that the area of the circle is less than that of the square since the circle fits inside it. You can also find the area of the circle by multiplying the area of the small square by Pi: Practice these methods and then try Quiz 4 on Area. Remember to use the Checklist to keep track of your work. Home Science Math and Arithmetic History Literature and Language Technology Health ⬚⚄ Law & Legal Issues Business & Finance All Topics Random Leaderboard Related Topics Math and Arithmetic Algebra Area Volume The circumference of a circle is the distance around the outside of a circle, which can be calculated using the radius \(r\) and the circumference formula \(C = 2\pi r\). Since it is a distance, the answer is given using any unit of length such as feet, inches, meters, or kilometers. In the lesson below, we will look at the different types of problems that use the circumference, including word problems. The distance around the edge of a circle. Also 'periphery' , 'perimeter'. Try this Drag the orange dots to move and resize the circle. The circumference is shown in blue. Note the radius changes and the circumference is calculated for that radius. You sometimes see the word 'circumference' to mean the curved line that goes around the circle. Other times it means the length of that line, as in "the circumference is 2.11cm". The word 'perimeter' is also sometimes used, although this usually refers to the distance around polygons, figures made up of straight line segments. If you know the radius Given the radius of a circle, the circumference can be calculated using the formula where: R is the radius of the circle π is Pi, approximately 3.142 See also Derivation of circumference formula If you know the diameter If you know the diameter of a circle, the circumference can be found using the formula where: D is the diameter of the circle π is Pi, approximately 3.142 See also Derivation of circumference formula If you know the area If you know the area of a circle, the circumference can be found using the formula where: A is the area of the circle π is Pi, approximately 3.142 See also Derivation of circumference formula Calculator Use the calculator above to calculate the properties of a circle. Enter any single value and the other three will be calculated. For example: enter the radius and press 'Calculate'. The area, diameter and circumference will be calculated. Similarly, if you enter the area, the radius needed to get that area will be calculated, along with the diameter and circumference. Related measures Radius The radius is the distance from the center of the circle to any point on the perimeter. See radius of a circle. Diameter The distance across the circle. See Diameter of a Circle for more. Other circle topics General Equations of a circle Angles in a circle Inscribed angle Central angle Central angle theorem Arcs (C) 2011 Copyright Math Open Reference. All rights reserved Something went wrong. Wait a moment and try again. The circumference of a circle is its perimeter or distance around it. It is denoted by C in math formulas and has units of distance, such as millimeters (mm), centimeters (cm), meters (m), or inches (in). It is related to the radius, diameter, and pi using the following equations: C = πdC = 2πr Where d is the diameter of the circle, r is its radius, and π is pi. The diameter of a circle is the longest distance across it, which you can measure from any point on the circle, going through its center or origin, to the connecting point on the far side. The radius is one-half the diameter or it can be measured from the origin of the circle out to its edge. π (pi) is a mathematical constant that relates a circle's circumference to its diameter. It is an irrational number, so it doesn't have a decimal representation. In calculations, most people use 3.14 or 3.14159. Sometimes it is approximated by the fraction 22/7. (1) You measure the diameter of a circle to be 8.5 cm. Find the circumference. To solve this, simply enter the diameter in the equation. Remember to report your answer with the proper units. C = πdC = 3.14 * (8.5 cm)C = 26.69 cm, which you should round up to 26.7 cm (2) You want to know the circumference of a pot that has a radius of 4.5 inches. For this problem, you can either use the formula that includes radius or you can remember the diameter is twice the radius and use that formula. Here's the solution, using the formula with radius: C = 2πrC = 2 * 3.14 * (4.5 in)C = 28.26 inches or 28 inches, if you use the same number of significant figures as your measurement. (3) You measure a can and find it is 12 inches in circumference. What is its diameter? What is its radius? Although a can is a cylinder, it still has a circumference because a cylinder is basically a stack of circles. To solve this problem, you need to rearrange the equations: C = πd may be rewritten as:C/π = d Plugging in the circumference value and solving for d: C/π = d(12 inches) / π = d12 / 3.14 = d3.82 inches = diameter (let's call it 3.8 inches) You could play the same game to rearrange a formula to solve for the radius, but if you have the diameter already, the easiest way to get the radius is to divide it in half: radius = 1/2 * diameterradius = (0.5) *(3.82 inches) [remember, 1/2 = 0.5]radius = 1.9 inches You should always check your work. One quick way to estimate whether your circumference answer is reasonable is to check to see if it's a bit more than 3 times larger than the diameter or slightly over 6 times larger than the radius. You should match the number of significant figures of the other values you are given. If you don't know what significant figures are or aren't asked to work with them, don't worry about this. Basically, this means if you have a very precise distance measurement, like 1244.56 meters (6 significant figures), you want to use 3.14159 for pi and not 3.14. Otherwise, you'll end up reporting a less precise answer. If you know the circumference, radius, or diameter of a circle, you can also find its area. Area represents the space enclosed within a circle. It's given in units of distance squared, such as cm2 or m2. The area of a circle is given by the formulas: A = πr2 (Area equals pi times the radius squared.) A = π(1/2 d)2 (Area equals pi times one-half the diameter squared.) A = π(C/2π)2 (Area equals pi times the square of the circumference divided by two times pi.) 1 Write down the formula for finding the circumference of a circle using the diameter. The formula is simply this: C = πd. In this equation, "C" represents the circumference of the circle, and "d" represents its diameter. That is to say, you can find the circumference of a circle just by multiplying the diameter by pi. Plugging π into your calculator will give you its numerical value, which is a closer approximation of 3.14 or 22/7.[1] 2 Plug the given value of the diameter into the formula and solve.[2] Example problem: You have a circle tub with a diameter of 8 feet, and you want to build a white fence that creates a 6-foot wide space around the tub. To find the circumference of the fence that has to be created, you should first find the diameter of the tub and the fence which will be 8 feet + 6 feet + 6 feet, which will account for the entire diameter of the tub and fence. The diameter is 8 + 6 + 6, or 20 feet. Now plug it into the formula, plug π into your calculator for its numerical value, and solve for the circumference: C = πd C = π x 20 C = 62.8 feet 1 Write down the formula for finding the circumference of a circle using the radius. The radius is half as long as the diameter, so the diameter can be thought of as 2r. Keeping this in mind, you can write down the formula for finding the circumference of a circle given the radius: C = 2πr. In this formula, "r" represents the radius of the circle. Again, you can plug π into your calculator to get its numerical value, which is a closer approximation of 3.14.[3] 2 Plug the given radius into the equation and solve. For this example, let's say you're cutting out a decorative strip of paper to wrap around the edge of a pie you've just made. The radius of the pie is 5 inches. To find the circumference that you need, just plug the radius into the equation:[4] C = 2πr C = 2π x 5 C = 10π C = 31.4 inches Add New Question Question What's the difference between the circumference and the diameter? wikiHow Staff Editor Staff Answer This answer was written by one of our trained team of researchers who validated it for accuracy and comprehensiveness. The diameter is the length of a straight line drawn through the center of a circle from one side to the other. The circumference is the length all the way around the outside of the circle. Question What is the perimeter of a circle? wikiHow Staff Editor Staff Answer This answer was written by one of our trained team of researchers who validated it for accuracy and comprehensiveness. The perimeter of a circle is the same as its circumference, the distance around it. The term "perimeter" refers to the distance around any closed shape, and "circumference" applies specifically to a circle or arc. Question What is a circumference? Circumference is the distance around the perimeter of a circle. It is calculated by multiplying the distance across the center (diameter) by Pi (3.1416). Question If I know the radius of a circle, how I can find the circumference? Double the radius to get the diameter. Then multiply by pi to get the circumference. Question How do I find the radius when I get the circumference? The circumference = π x the diameter of the circle (Pi multiplied by the diameter of the circle). Simply divide the circumference by π and you will have the length of the diameter. The diameter is just the radius times two, so divide the diameter by two and you will have the radius of the circle! Question How can I find the circumference? Circumference (C) = pi * diameter(d). To get the diameter of a circle take the circumference (C) and divide it by pi (3.14). Question How do I find the area of a circle when only given the circumference? Divide the circumference by pi. That's the diameter. Divide by 2. That's the radius. Square the radius, and, multiply by pi. That's the area. Question What is the formula used to calculate diameter? The diameter is twice the radius. The circumference is diameter x pi, or 2 x radius x pi. Question How do I change the mixed number into radius? If your radius is a mixed number, turn the number into an improper fraction. To do this, simply multiply the whole number part by the denominator and add that number to the numerator. The denominator should remain the same throughout the process. You can then use the improper fraction in your formula. Question What is the answer of the circumference of a circle? The answer depends on your number. For example, pie or 3.14 is multiplied with your number which is the diameter or radius. Show more answers Ask a Question Thanks! Thanks! Thanks! Thanks! wikiHow is a "wiki," similar to Wikipedia, which means that many of our articles are co-written by multiple authors. To create this article, 224 people, some anonymous, worked to edit and improve it over time. This article has been viewed 9,143,965 times. Co-authors: 224 Updated: July 21, 2021 Views: 9,143,965 Categories: Featured Articles | Geometry Print Send fan mail to authors Thanks to all authors for creating a page that has been read 9,143,965 times.

the circumference of a circle represents quizlet. which formula represents the circumference of a circle. the ratio of the circumference of a circle to its diameter represents. what does the circumference of a circle represent. what does circumference of a circle mean. what is the circumference of a circle meaning