

Grade 7 - Circumference and Area of Circles - Worksheet

Common Core 7.G.B.4 · maths-pdf.fr/en/

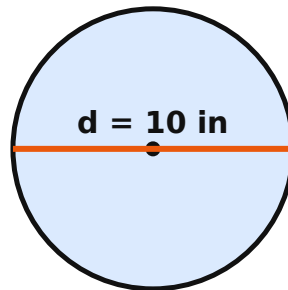
Name: _____ Class: _____ Date: ____/____/____

These 20 problems practice the circumference and area of circles, the meaning of pi, radius and diameter, and semicircles and composite figures (Common Core 7.G.B.4). They start with the basic skill, move to different kinds of numbers and multistep work, and end with six word problems set in everyday situations such as shopping, sports, and travel.

Show every step of your work, and use the answer key only after you have tried each problem.

Grade 7 · Common Core State Standards: **7.G.B.4**

Exercise 1 - Circumference from diameter



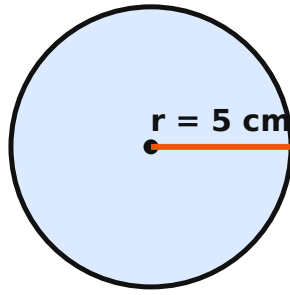
A circle with diameter 10 in.

Find the circumference of a circle with a diameter of 10 in. Use $\pi \approx 3.14$.

Exercise 2 - Circumference from radius

Find the circumference of a circle with a radius of 7 ft. Use $\pi \approx 3.14$.

Exercise 3 - Area from radius



A circle with radius 5 cm.

Find the area of a circle with a radius of 5 cm. Use $\pi \approx 3.14$.

Exercise 4 - Area from diameter

Find the area of a circle with a diameter of 12 in. Use $\pi \approx 3.14$.

Exercise 5 - Radius from circumference

A circle has a circumference of 18.84 ft. Use $\pi \approx 3.14$ to find the radius and the diameter.

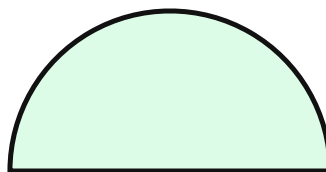
Exercise 6 - Radius from area

A circle has an area of 50.24 square meters. Use $\pi \approx 3.14$ to find the radius.

Exercise 7 - Pi as 22/7

A circle has a radius of 14 cm. Use $\pi \approx \frac{22}{7}$ to find the circumference and the area.

Exercise 8 - Semicircle perimeter



10 in

A semicircle.

Find the perimeter of the semicircle. Use $\pi \approx 3.14$.

Exercise 9 - Quarter circle

A quarter circle has a radius of 8 in. Find its area. Use $\pi \approx 3.14$.

Exercise 10 - In terms of pi

A circle has a diameter of 9 m. Write its circumference and area in terms of π .

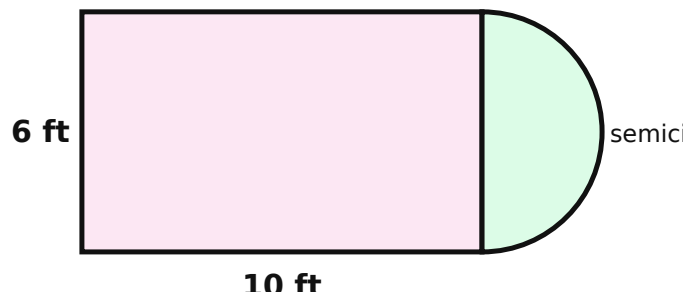
Exercise 11 - Bike wheel

A bike wheel has a diameter of 26 in. How far does it roll in one full turn? How far in 10 turns? Use $\pi \approx 3.14$.

Exercise 12 - Two pizzas

A small pizza has a diameter of 12 in and a large pizza has a diameter of 16 in. Find the area of each and the difference. Use $\pi \approx 3.14$.

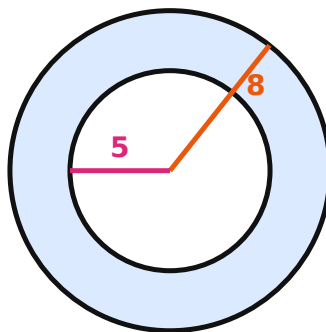
Exercise 13 - Composite figure



A rectangle with a semicircle at one end.

Find the area of the figure: a 10-ft by 6-ft rectangle with a semicircle (diameter 6 ft) attached to one end. Use $\pi \approx 3.14$.

Exercise 14 - Ring

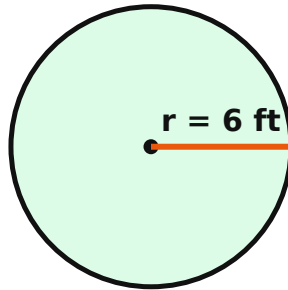


A ring (washer) between two circles.

A washer has an outer radius of 8 mm and an inner radius of 5 mm. Find the area of the metal.

Use $\pi \approx 3.14$.

Exercise 15 - Garden fence



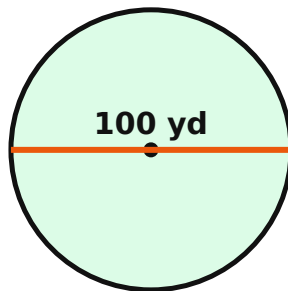
The garden.

A circular garden has a radius of 6 ft. Fencing costs \$3.50 per foot. Find the circumference and the cost. Use $\pi \approx 3.14$.

Exercise 16 - Round table

A round table has a diameter of 5 ft. Find its area to the nearest hundredth. Use $\pi \approx 3.14$.

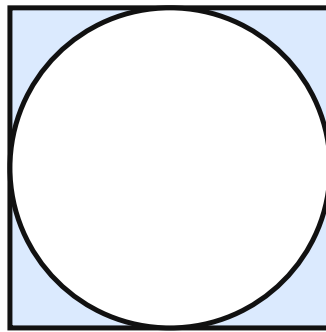
Exercise 17 - Running track



A circular track.

A circular track has a diameter of 100 yd. Mei runs 3 laps. How far does she run? Use $\pi \approx 3.14$.

Exercise 18 - Circle in a square



10 in

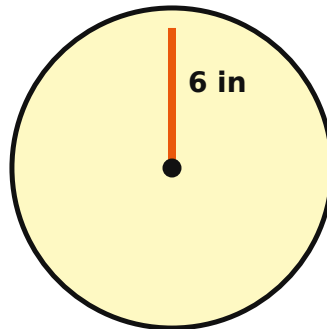
A circle in a square.

The largest circle is cut from a square sheet of metal 10 in on each side. Find the area of the metal left over. Use $\pi \approx 3.14$.

Exercise 19 - Pie crust

A pie has a radius of 4.5 in. Find the area of the top crust to the nearest hundredth. Use $\pi \approx 3.14$.

Exercise 20 - Clock hand



The minute hand.

The minute hand of a wall clock is 6 in long. How far does its tip travel in one hour? Use $\pi \approx 3.14$.