6th Basic

7th Advanced

Helping With Math

USA GRADES

Circumference of a Circle

Suitable for students **aged 10-12**

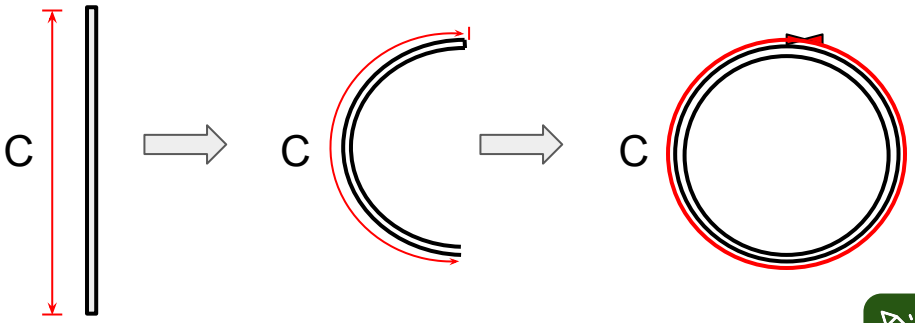
This pack is suitable for learners aged 10-12 years old or 6th to 7th graders (USA). The content covers fact files and relevant basic and advanced activities involving circumference of a circle.

Circumference of A Circle

Formula: $C = 2\pi r$

Where r is the radius of the circle

- Circumference of a circle is considered as the perimeter of a circle.
- It is a distance around a circle or what we call the arc length.
- Imagine a straight line bended to connect its two ends. The length of this line is the circumference of the circle formed as shown below



CONCEPTS

Examples:

Compute the Circumference of the circle with the following radius.

a. r = 3m
C = 2πr
C = 2π(3m)
C = 6π
C = 18.85 m

b. r = 5m
C = 2πr
C = 2π(5m)
C = 10π
C = 31.42m m

c. r = 0.5m
C = 2πr
C = 2π(0.5m)
C = π
C = 3.14 m

1. Liza bought a pizza with a diameter of 12 inches. Solve for the circumference of the pizza that Liza bought.
Solution: Formula is C = 2πr, r = 6 in because the diameter is 12 inches.

Thus, C = 2π(6) = 12π or 12 (3.1416) = **37. 70 inches**

2. Kim is a cook and he always makes egg omelet for his customers. The egg omelet has a circumference of 37.7 cm. Find its diameter.

TABLE OF ACTIVITIES

SUMMER BLUES

G6 Basic

Get rid of summer blues by joining this year's summer party! To confirm your RSVP, determine whether the following statements are TRUE about circumference of a circle.

Modified TRUE or FALSE.

1.) Area is the distance around the outside of a circle.

2.) Circumference is also equivalent to a perimeter.

3.) Circumference of a circle can be calculated using a diameter.

4.) We can find the circumference of a circle by multiplying the radius to pi.

5.) $2\pi r$ is used to find the circumference of a circle.

6.) The circumference of a circle with a radius of 5 is 25π.

7.) If the diameter of a circle is 12 cm, then its circumference is about 37.7cm.

Answer sheet	1.	2,	3.
4.	5.	6.	7.

MELON ICE CREAM

G6
Basic

How nice it would be to have melon ice cream in this summer party! Get two free melon ice creams by completing the task.

Give the circumference of the circle given the radius or diameter in terms of π.

1.) radius = 6

2.) radius = 13

3.) radius = 0.4

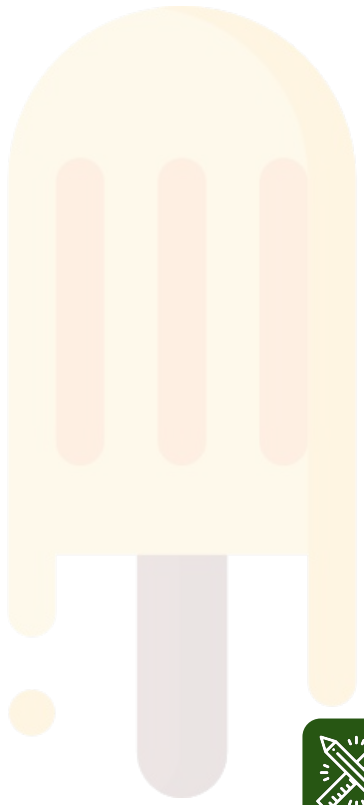
4.) radius = 3.7

5.) diameter = 37.8

6.) diameter = 58.15

7.) diameter = 177.2

8.) diameter = 203.1



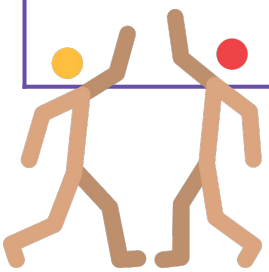
SUMMER DANCE PARTY

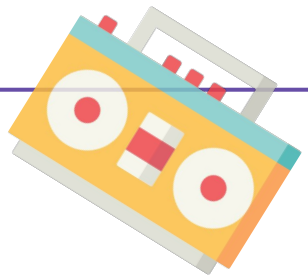
G6 Basic

Show your perfect and amazing dance moves in this party as you accomplish the task below.

Give the circumference of the circle given the radius or diameter. Use the value of π of your calculator. Round off your answer to the nearest tenth.

1. radius = 9 m	2. radius = 17 cm	3. radius = 0.8 mi
4. diameter = 5.4 km	5. diameter = 37.6 yd	6. diameter = 129.1 in



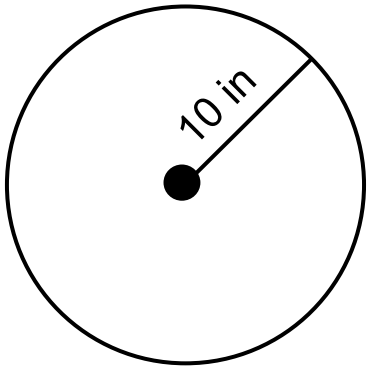


TROPICAL ROUND BALLS

G6 Basic

Look at these tropical round balls' outlines. Which among them has the largest circumference? Encircle the number of your answer. Round off your answer to the nearest tenth,

1.)



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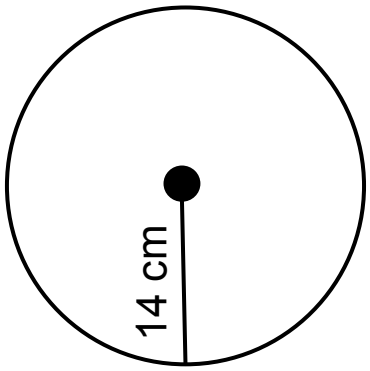

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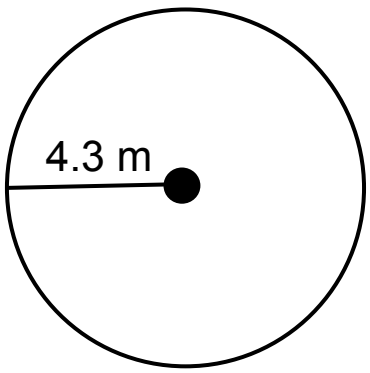

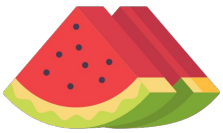

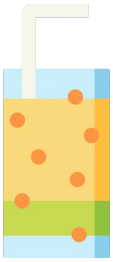

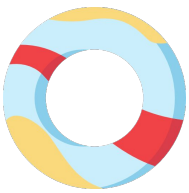

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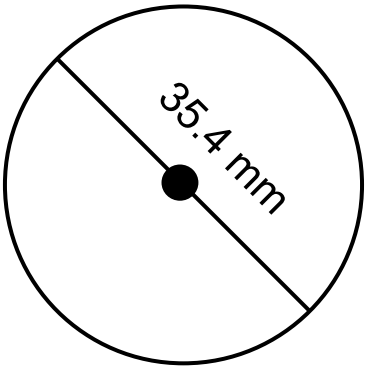

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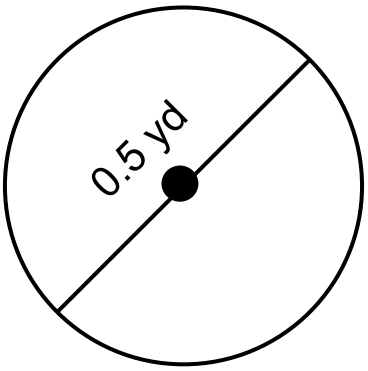

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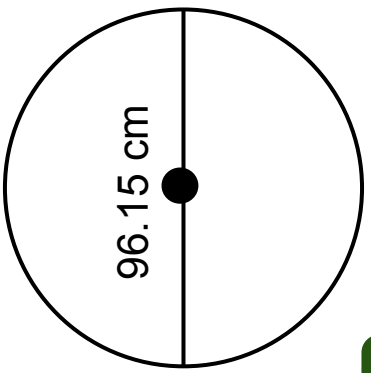


ON A SUMMER DAY

G6 Basic

These are some common scenarios on a summer day. Use your understanding of circumference of a circle to solve each item. Round off your answer to the nearest tenth.

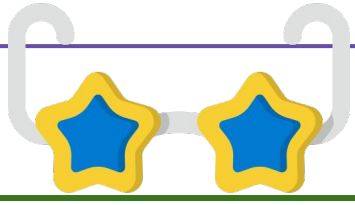
1. A rubber band has a diameter of 2.5 inches. What is the distance around the rubber band?

2. The spoke of a bicycle wheel measures 13.5 inches from its hub. What is the circumference of the rim?

3. If you are going to remove the crust of an 18-inch pizza, how long is it in nearest whole number?

4. A circular swimming pool with a diameter of 35.5 feet is to be fenced and decorated with a ribbon for a wedding. How much ribbon is needed for the pool?

5. A driving school has its own practice area. One of those is in circular shape with a diameter of 150 meters. Michael drove around twice. About how far did Michael drive?

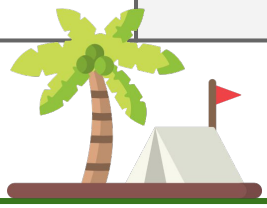


HOORAY FOR DELICIOUS FRUITS!

G7 Advanced

Want to have these delicious tropical fruits? Go and get them by deriving the length of the radius from each given circumference. Note: Use 3.14 as the value of π.

1. C = 43.96 in 	2. C = 160.14 ft 
3. C = 492.1008 mi 	4. C = 628.314 cm 



SUMMER PARTY INVITATION

G7 Advanced

See what's inside the summer party invitation by giving the diameter of the circle using the circumference provided. Use 3.14 as the value of π.

1. C = 59.66 m

2. C = 100.48 yd

3. C = 557.664 ft

4. C = 1 250.2852 mm

THE BEST SUMMER PARTY

G7 Advanced

Do not miss out the best summer party ever! But before that, do your homework first. Encircle your choice.

1.) Which of the following can be used to determine the diameter of a circle given the circumference?

A. $d = \frac{\pi}{C}$

C. $d = \frac{2\pi}{C}$

B. $d = \frac{C}{\pi}$

D. $d = \frac{C}{2\pi}$

2.) Which of the following can be used to determine the radius of a circle given the circumference?

A. $d = \frac{\pi}{C}$

C. $d = \frac{2\pi}{C}$

B. $d = \frac{C}{\pi}$

D. $d = \frac{C}{2\pi}$

3.) What is the diameter of the circle if the circumference is 805.96 units? Use 3.14 as the value of pi.

A. 2 564 units
C. 1 282 units
B. 256.4 units
D. 128.2 units

4.) What is the diameter of the circle with the same value of area and circumference?

A. 4 B. 3 C. 2 D. 1

DANCE THE SUMMER NIGHT AWAY

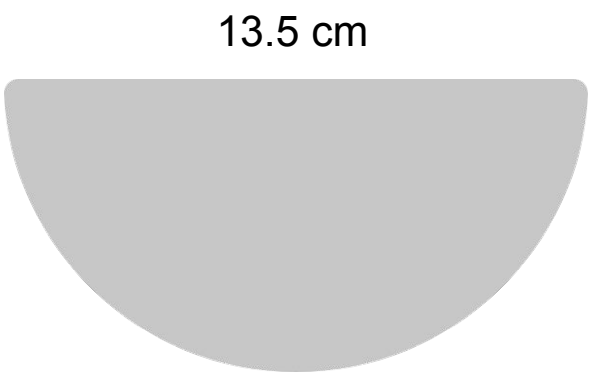
G7 Advanced

Move and groove to the summer tunes! But do you have a moment to answer these challenging questions?

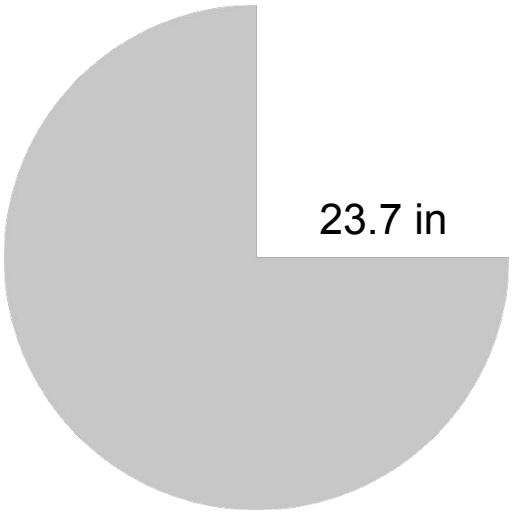
1.) A hamster wheel has a radius of half a ruler. How far will it turn in one revolution in inches?

2.) What is the circumference of a circle if its area is 113.04 square units?

3.) Find the perimeter in nearest tenths if the diameter is 13.5 cm.



4.) Find the perimeter nearest tenths if the radius is 23.7 in.



SUMMER PARTY: ONE OF THE BOOKS

G7 Advanced

This memorable summer party will not be completed if the following questions are left answered. Complete the task below and make this party one of the books!

Answer the following problems. Round off your answer to the nearest tenth.

1.) Two pizzas from different stores were ordered for John's birthday party. Pizza A has a circumference of approximately 113.1 inches while pizza B has a diameter of 20 inches. Which of the two pizzas is bigger? Why?

2.) A fire dancer is performing near the seashore and turning the fire poi around. The fire poi has a cord with a soft cloth ball at one end with a length of 43 inches. If the fire dancer makes 5 revolutions, how many inches did it turn?

3.) It takes Paul 8.5 minutes to run once around a circular park that has a radius of 45 meters. About how many meters per minute is Paul running assuming that he runs in an average speed?

4.) George is buying new tires for his bicycle. The rim of his bike has a radius of 2 less than twice the radius of the tire which is 14 inches. How longer is the circumference of the tire from the circumference of the rim?

ANSWER GUIDE

Activity 1

1.) Circumference	2.) True	3.) True	
4.) diameter	5.) True	6.) 10π	7.) True

Activity 2

1.) 12π	2.) 26π	3.) 0.8π	4.) 7.4π
5.) 37.8π	6.) 58.15π	7.) 177.2π	8.) 203.1π

Activity 3

1.) 56.5 m	2.) 106.8 cm	3.) 5.0 mi
4.) 17.0 km	5.) 118.2 yd	6.) 405.6 in

Activity 4

1.) 62.8 in	2.) 88.0 cm	3.) 27.0 m
4.) 111.2 mm	5.) 3.14 yd	6.) 302.1 cm

Activity 5

1.) 7.9 inches	2.) 84.8 inches	3.) 57 inches
4.) 111.5 feet	5.) 942.5 meters	

ANSWER GUIDE

Activity 6

1.) 7 in 2.) 25.5 ft 3.) 78.36 mi 4.) 100.05 cm

Activity 7

1.) 9.5 m 2.) 16 yd 3.) 88.8 ft 4.) 199.09 mm

Activity 8

1.) B 2.) D 3.) B 4.) C

Activity 9

1.) 37.1 inches
2.) 37.68 units
3.) 34.7 cm
4.) 159.1 in

Activity 10

1.) Pizza A
2.) 1 350.9 inches
3.) 33.3 meters
4.) 6.3 inches

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