



**THIRD SPACE
LEARNING**

Pi R Squared Worksheet

Geometry

Grades 6 to 8

Skill Questions

Name:

Date:

- 1 The diameter of a circle is 18 inches. Find the radius of the circle.

Answer

- 2 The radius of a circle is 6.2 cm . Find the circumference, rounded to the nearest tenth.

Answer

- 3 If the circumference of a circle is 22π inches, find the diameter of the circle.

Answer

- 4 Find the area of a circle if the radius is 3 cm . Leave your answer in terms of π .

Answer

- 5 Find the area of a circle if the diameter is 15 inches. Round your answer to the nearest tenth.

Answer

- 6 The diameter of a semi-circle is 17 feet. Find the area of the semi-circle rounded to the nearest tenth.

Answer

- 7 The circumference of a circle is 45.3 cm . Find the radius of the circle, rounded to the nearest tenth.

Answer

- 8 The diameter of a circle is 24 cm . Find the area of the circle, leave your answer in terms of π .

Answer

- 9 The diameter of a circle is 5 cm . Is it necessary to find the radius of this circle in order to find the circumference of the circle?

Answer

- 10 Explain how to calculate the area of a circle.

Applied Questions

- 11 Rianna has a circular shaped garden that she would like to fence. The diameter of the garden is 26 feet and the fence costs \$22 per foot. How much will she pay to fence in her garden?

Answer

- 12 Dave's sunflower field is in the shape of a semi-circle. The diameter of the semi-circle is 20 meters. He wants to build a fence around the field. How many meters of fencing will he need?

Answer

- 13 Juliet has a circular shaped room with a circular ceiling. The radius of the ceiling is 16 feet. She wants to paint the ceiling with ivory colored paint. One can of paint can cover 100 ft^2 . How many cans of paint does she need to buy?

Answer

- 14 If the circumference of Aaron's circular area rug is 14π inches. What is the area of the rug in terms of π ?

Answer

- 15 The new park has a circular rose garden. The park commissioner wants a pathway right through the center of the garden, connecting one edge to the other. If the circular rose garden has an area of $169\pi \text{ m}^2$. Find the length of the pathway to the nearest whole meter.

Answer

Answers

| Question number | Question | Answers | Standard |
|-----------------|--|---|----------|
| 1 | The diameter of a circle is 18 inches. Find the radius of the circle. | Radius = 9 inches | 7.G.B.4 |
| 2 | The radius of a circle is 6.2 cm. Find the circumference, rounded to the nearest tenth. | $C = 2r\pi$ $C = 2(6.2)(3.14)$ $C = 38.9\text{ cm}$ | 7.G.B.4 |
| 3 | If the circumference of a circle is 22π inches, find the diameter of the circle. | $C = d\pi$ $22 = d\pi$ $22 = d$ Diameter = 22 inches | 7.G.B.4 |
| 4 | Find the area of a circle if the radius is 3 cm. Leave your answer in terms of π . | $A = \pi r^2$ $A = \pi(3)^2$ $A = 9\pi$ Area = $9\pi\text{ cm}^2$ | 7.G.B.4 |
| 5 | Find the area of a circle if the diameter is 15 inches. Round your answer to the nearest tenth. | Radius = 7.5 inches $A = (7.5)^2(3.14)$ $A = 176.6\text{ in}^2$ | 7.G.B.4 |
| 6 | The diameter of a semi-circle is 17 feet. Find the area of the semi-circle rounded to the nearest tenth. | $A = \frac{\pi r^2}{2}$ Radius = 8.5 feet $A = \frac{(3.14)(8.5)^2}{2}$ $A = 113.4$ The area of the semi-circle is 113.4 feet | 7.G.B.4 |
| 7 | The circumference of a circle is 45.3 cm. Find the radius of the circle, rounded to the nearest tenth. | $C = d\pi$ $45.3 = d(3.14)$ $14.4 = d$ Radius = $14.4 \div 2$ Radius = 7.2 cm | 7.G.B.4 |

| Question number | Question | Answers | Standard |
|-----------------|---|--|----------|
| 8 | The diameter of a circle is 24 <i>cm</i> . Find the area of the circle, leave your answer in terms of Π . | Radius = $24 \div 2$ Radius = 12 <i>cm</i> $A = (12)^2 \Pi$ $A = 144 \Pi \text{ cm}^2$ | 7.G.B.4 |
| 9 | The diameter of a circle is 5 <i>cm</i> . Is it necessary to find the radius of this circle in order to find the circumference of the circle? | No, it's not necessary to find the length of the radius because you can calculate the circumference of a circle with the diameter length. | 7.G.B.4 |
| 10 | Explain how to calculate the area of a circle. | To calculate the area of a circle, find the radius length of the circle and square it. Then multiply it by Π which can be rounded to 3.14. | 7.G.B.4 |
| 11 | Rianna has a circular shaped garden that she would like to fence. The diameter of the garden is 26 feet and the fence costs \$22 per foot. How much will she pay to fence in her garden? | Find the circumference of the garden. $C = d\Pi$ $C = 26(3.14)$ $C = 81.64 \text{ feet}$ Cost: $22 \times 81.64 = 1796.08$ The fence is going to cost, \$1,796.08 | 7.G.B.4 |
| 12 | Dave's sunflower field is in the shape of a semi-circle. The diameter of the semi-circle is 20 meters. He wants to build a fence around the field. How many meters of fencing will he need? | $C = \frac{d\Pi}{2}$ $C = \frac{20(3.14)}{2}$ $C = 31.4$ Circular part of field is 31.4 meters plus the straight edge portion (diameter) = $31.4 + 20 = 51.4m$ | 7.G.B.4 |




| Question number | Question | Answers | Standard |
|-----------------|---|--|----------|
| 13 | Juliet has a circular shaped room with a circular ceiling. The radius of the ceiling is 16 feet. She wants to paint the ceiling with ivory colored paint. One can of paint can cover 100 ft^2 . How many cans of paint does she need to buy? | $A = 16^2 \Pi$ $A = 256(3.14)$ $A = 803.84 \text{ ft}^2$ (area of the ceiling) Divide: $803.84 \div 100 = 8.038$ Since a little more than 8 cans of paint will be needed, Juliet has to buy 9 cans of paint. | 7.G.B.4 |
| 14 | If the circumference of Aaron's circular area rug is 14Π inches. What is the area of the rug in terms of Π ? | $C = d \Pi$ $14 \Pi = d \Pi$ $14 = d$ The diameter is 14 inches. Radius = $14 \div 2 = 7$ $A = (7)^2 \Pi$ $A = 49 \Pi \text{ inches}^2$ | 7.G.B.4 |
| 15 | The new park has a circular rose garden. The park commissioner wants a pathway right through the center of the garden, connecting one edge to the other. If the circular rose garden has an area of $169 \Pi \text{ meters}^2$. Find the length of the pathway to the nearest whole meter. | $A = \Pi r^2$ $169 \Pi = \Pi r^2$ $169 = r^2$ $13 = r$ Radius = 13 meters so the diameter is $2 \times 13 = 26$ The length of the pathway is 26 meters. | 7.G.B.4 |

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-  thirdspacelearning.com/us/
-  +1 929-298-4593
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