

# Pi R Squared Worksheet

Geometry

Grades 6 to 8

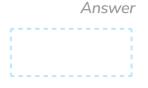
Skill (	Questions
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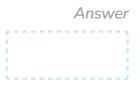
1 The diameter of a circle is 18 inches. Find the radius of the circle.



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



3 If the circumference of a circle is  $22\,\Pi$  inches, find the diameter of the circle.



Find the area of a circle if the radius is 3cm. Leave your answer in terms of  $\prod$ .



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

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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 $\it cm$ . Find the radius of the to the nearest tenth.	e circle, rounded	
		Answer	
		(	
8	The diameter of a circle is 24 $cm$ . Find the area of the circle, leave your answer in terms of $\Pi$ .		
		Answer	
9	The diameter of a circle is $5cm$ . Is it necessary to find the radiin order to find the circumference of the circle?	ius of this 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?
	Angwar
	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 $100ft^2$ . How many cans of paint does she need to buy?
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	Answer

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14	If the circumference of Aaron's circular area rug is $14\Pi$ inches. What is the area of the rug in terms of $\Pi$ ?
	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 <i>cm</i> . Find the circumference, rounded to the nearest tenth.	$C = 2r\Pi \ C = 2(6.2)(3.14) \ C = 38.9cm$	7.G.B.4
3	If the circumference of a circle is $22\Pi$ 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 $3cm$ . Leave your answer in terms of $\Pi$ .	$A = \Pi r^2 \ A = \Pi (3)^2 \ A = 9  \Pi \ Area = 9  \Pi  cm^2$	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 $A=(7.5)^2(3.14) \ A=176.6in^2$	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.	$A=rac{\prod r^2}{2}$ Radius = 8.5 feet $A=rac{(3.14)(8.5)^2}{2}$ $A=113.4$ The area of the semicircle 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

#### Pi R Squared Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
8	The diameter of a circle is $24cm$ . Find the area of the circle, leave your answer in terms of $\Pi$ .	Radius = $24 \div 2$ Radius = $12~cm$ $A = (12)^2 \Pi$ $A = 144 \Pi ~cm^2$	7.G.B.4
9	The diameter of a circle is $5cm$ . 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 II 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. $C = d\Pi$ $C = 26(3.14)$ $C = 81.64 feet$ 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?	$C=rac{d\prod}{2}$ $C=rac{20(3.14)}{2}$ $C=31.4$ Circular part of field is 31.4 meters plus the straight edge portion (diameter) = $31.4+20$ = $51.4m$	7.G.B.4

#### Pi R Squared Worksheet | Grades 6 to 8 | Answers

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 $100ft^2$ . How many cans of paint does she need to buy?	$A=16^2\Pi$ $A=256(3.14)$ $A=803.84ft^2$ (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 $14\Piinches$ . What is the area of the rug in terms of $\Pi$ ?	$C=d\Pi$ $14\Pi=d\Pi$ $14=d$ The diameter is $14$ inches. Radius = $14\div 2=7$ $A=(7)^2\Pi$ $A=49\Piinches^2$	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 $169  \text{II} \ meters^2$ . Find the length of the pathway to the nearest whole meter.	$A=\prod r^2$ $169\prod=\prod r^2$ $169=r^2$ $13=r$ 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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