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QUESTION 1

*Fill in the blank(s) with the correct answer.*

A gear has a radius of 2 cm. The gear turns at a rate of 270 revolutions per minute. What is the angular speed,

 ω

, of the gear in radians per minute? When the gear turns at 4.5 revolutions per hour, what is the linear speed,

 v

, in meters per day?

Round each answer to the nearest tenth.


 $\omega \approx$

1696.5



radians per minute

 $v \approx$

13.6



meters per day

QUESTION 2

*Drag and drop the correct answer into the space(s) provided.*

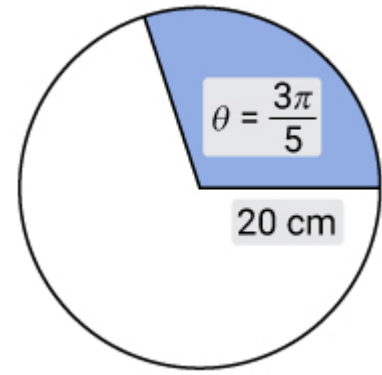
Determine the area of the sector of this circle.

 $A =$

120

 π

square centimeters



40

600

240

QUESTION 3



Drag and drop the correct answer into the space(s) provided.

A pie has one piece remaining as shown in the image.

What is the approximate area of the piece of pie, rounded to the nearest whole centimeter?

The area of this piece of pie is

61



square centimeters.



31

19

6

122

QUESTION 4



Drag and drop the correct answer into the space(s) provided.

The Ferris wheel has a radius of 22 meters.
The Ferris wheel turns at a rate of 480 revolutions per hour. Determine the angular speed,

ω

, of the Ferris wheel in radians per hour.

When the Ferris wheel turns at 8 revolutions per minute, what is the linear speed,

v

, in kilometers per second?

Round each answer to the nearest hundredth.



$\omega \approx$

3015.93



radians per hour

$v \approx$

0.02



kilometers per second

66.35

18430.68

18.4

1507.96

753.98

QUESTION 5



Fill in the blank(s) with the correct answer.

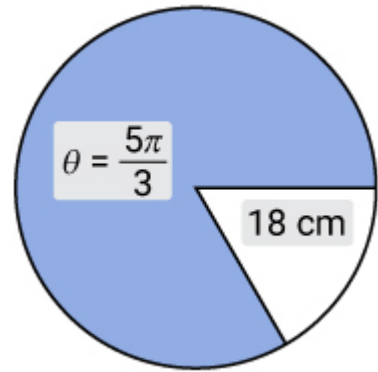
Find the area of the sector of the circle.

$A =$

270

 π

square centimeters



QUESTION 6

*Fill in the blank(s) with the correct answer.*

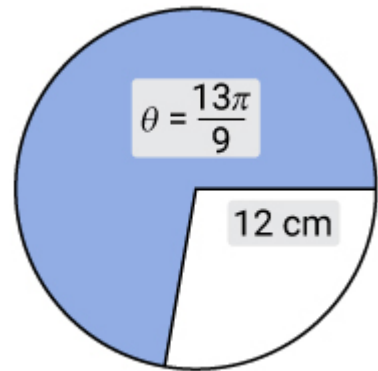
Find the area of the sector of this circle.

 $A =$

104

 π

square centimeters



QUESTION 7

*Fill in the blank(s) with the correct answer.*

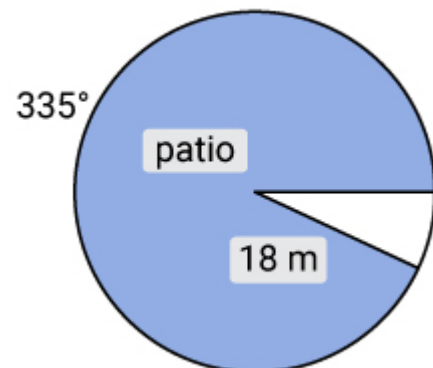
What is the approximate area of the patio, rounded to the nearest whole meter?

The area of the patio is approximately

947



square meters.



QUESTION 8



Fill in the blank(s) with the correct answer.

A circular park has a pond area as shown in the image.

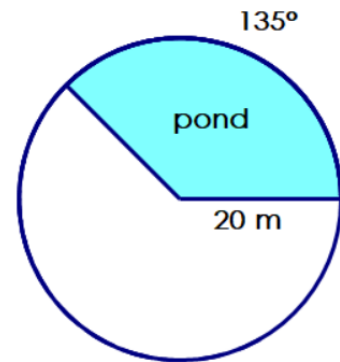
What is the approximate area of the pond, rounded to the nearest whole meter?

The area of the pond is approximately

471



square meters.



QUESTION 9



Fill in the blank(s) with the correct answer.

The wheel of a bicycle has a radius of 40 cm. During one trip, the wheel turns at a rate of 150 revolutions per minute.

Determine the angular speed,

ω

, of the wheel in radians per minute. When the wheel turns at 2.5 revolutions per second, what is the linear speed,

v

, in kilometers per hour?

Round each answer to the nearest tenth.



$\omega \approx$

942.5



radians per minute

$v \approx$

22.6



kilometers per hour

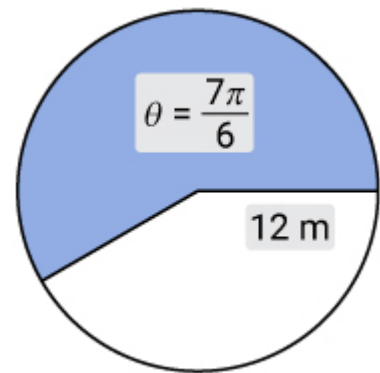
QUESTION 10

*Choose the correct answer from the drop-down menu.*

Find the area of the sector of this circle.

 $A =$ 84 π 

square meters



QUESTION 11

*Choose the correct answer from the drop-down menu.*

The circular courtyard of a home, like the one shown, has a patio area as indicated in the image.

What is the approximate area of the patio, rounded to the nearest tenth of a meter?



The area of the patio is approximately 52.4



square

meters.

QUESTION 12



Choose the correct answer from the drop-down menu.

The wheel of a bicycle has a radius of 32 cm. During one trip, the wheel turns at a rate of 210 revolutions per minute. Determine the angular speed,

ω

, of the wheel in radians per minute. When the wheel turns at 3.5 revolutions per second, what is the linear speed,

v

, in kilometers per hour?

Round each answer to the nearest tenth.

$\omega \approx$

1319.5 ✓ ▼ radians per minute

$v \approx$

25.3 ✓ ▼ kilometers per hour

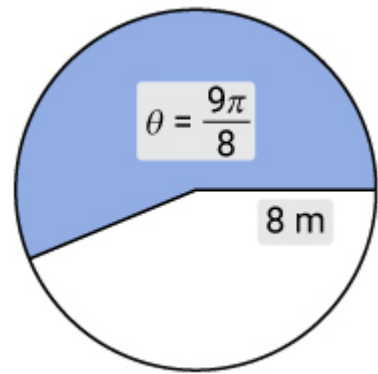


QUESTION 13



Select the correct option.

What is the area of the sector of this circle?

☐

$A = 72\pi$
square meters

☐

$A = 9\pi$
square meters

☐

$A = 288\pi$
square meters

☒

$A = 36\pi$
square meters



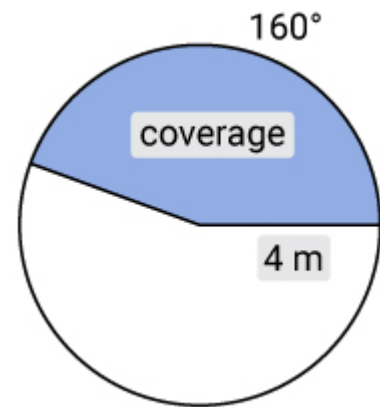
QUESTION 14



Select the correct option.

A water sprinkler covers the shaded area in the image.

What is the approximate area of coverage, rounded to the nearest tenth of a meter?



22.3 square meters



☐ 11.2 square meters

☐ 44.7 square meters

☐ 7.1 square meters

QUESTION 15



The tire of a car has a radius of 40 cm. During one trip, the tire turns at a rate of 840 revolutions per minute. What is the angular speed,

ω

, of the tire in radians per minute? When the wheel turns at 14 revolutions per hour, what is the linear speed,

v

, in meters per second?



Round each answer to the nearest hundredth.

☒	$v \approx 0.01$ meters per second	
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☐	$v \approx 0.59$ meters per second	
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☐	$\omega \approx 2638.94$ radians per minute	
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☐	$\omega \approx 87.96$ radians per minute	
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☒	$\omega \approx 5277.88$ radians per minute	
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☐	$v \approx 0.98$ meters per second	
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