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QUESTION 1

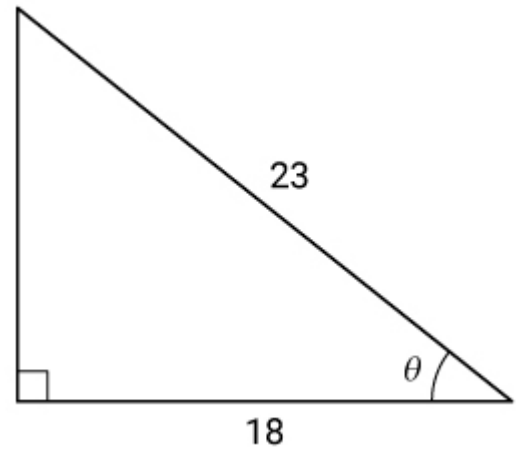


Find the value of

 θ

in the triangle shown.

Round the answer to the nearest tenth of a degree.

☒ 38.5°

46.1°



32.7°



51.6°

QUESTION 2

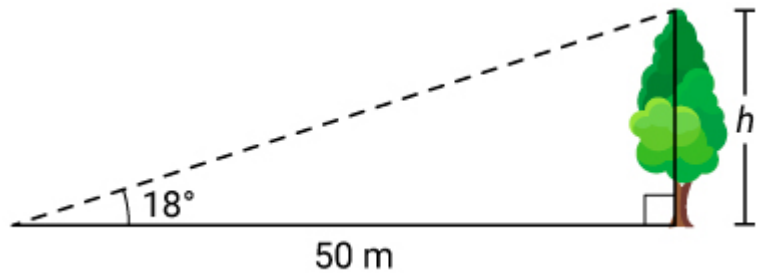


Saaed is standing 50 meters from the base of a tree. He sees the top of the tree at an angle of elevation of 18° .

. Determine the approximate height of the tree.

Select your answer from the drop-down menu to complete the sentence.

The height of the tree is approximately meters.

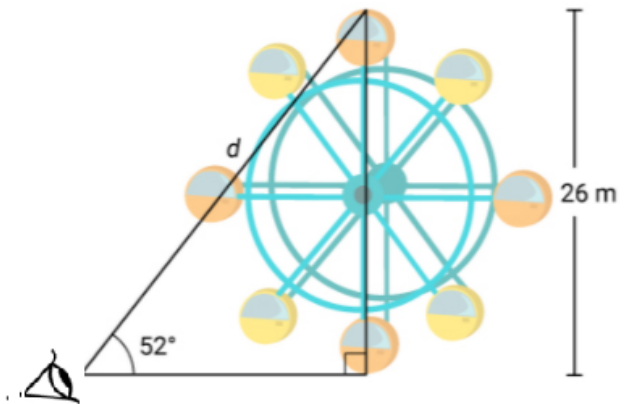


QUESTION 3



Fatima is looking at a friend who is at the top of a Ferris wheel. She knows that the top of the Ferris wheel is 26 meters high. From where she is standing, Fatima sees her friend at an angle of elevation of 52° .

. Approximately how far is the distance from Fatima to her friend at the top of the Ferris wheel? Round your answer to the nearest tenth.



☐ 95.5 meters

☐ 118.6 meters

☐ 41.9 meters

☒ 33.0 meters



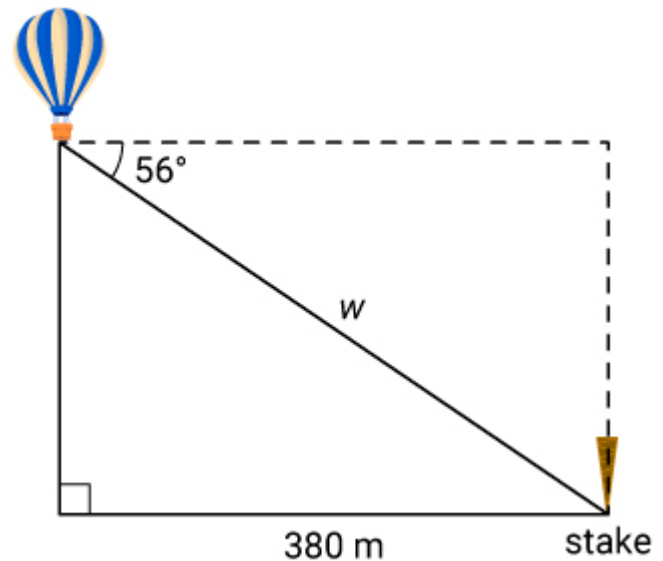
QUESTION 4



A hot air balloon is being held to the ground by a long wire. If the hot air balloon were on the ground, it would be 380 meters away from the stake in the ground. The angle of depression from the balloon to the ground is

56°

What is the length of the wire holding the hot air balloon to the ground? Round your answer to the nearest whole meter.



Drag and drop your answer to correctly complete the sentence.

The length of the wire holding the hot air balloon to the ground is

680



meters.

563

256

459

QUESTION 5



Find the value of

θ

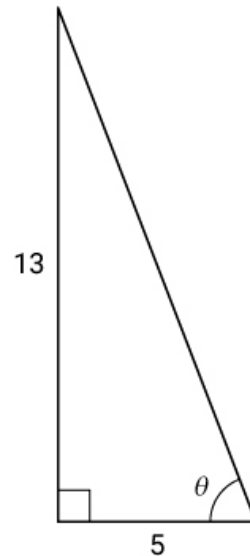
in the triangle shown. Round the answer to the nearest whole degree.

Enter your answer in the space provided.

The measure of

$\theta \approx$

69



QUESTION 6



Find the value of

θ

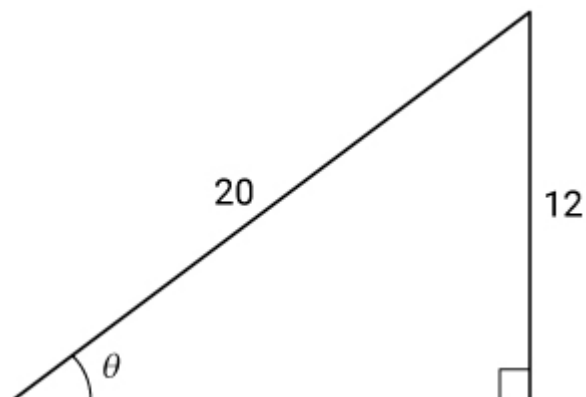
in the triangle shown. Round the answer to the nearest whole degree.

Select your answer from the drop-down menu.

The measure of

$\theta \approx$

37°



QUESTION 7



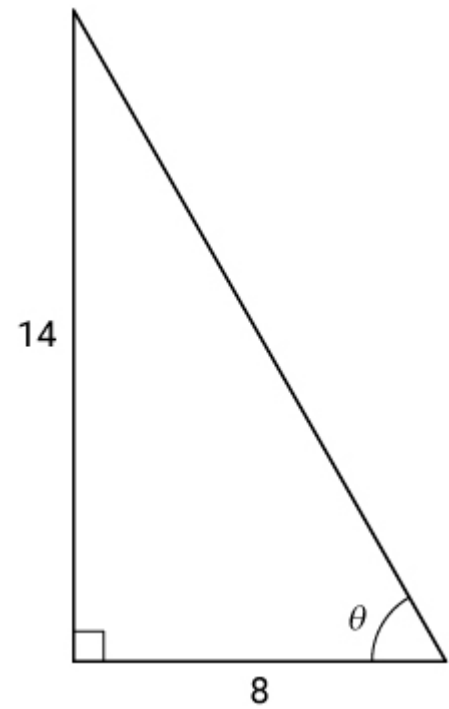
Find the value of

θ

in the triangle shown. Round the answer to the nearest whole degree.
Select your answer from the drop-down menu.

 $\theta \approx$

60° ✓ ▼



QUESTION 8

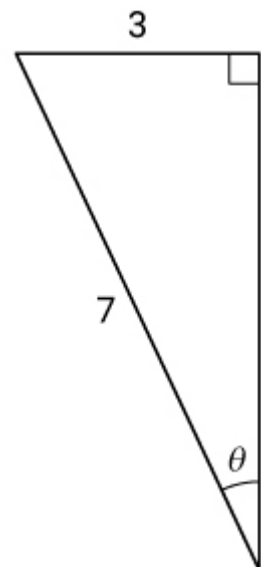


Find the value of

 θ

in the triangle shown.

Round the answer to the nearest whole degree.



☒

25°

✓

☐

67°

 28°  64°

QUESTION 9



Sherine is watching airplanes land at an airport that is 4 kilometers away. She watches a particular plane at an angle of elevation of 70°

. Approximately how high in the air is this plane that Sherine is watching? Round your answer to the nearest whole kilometer.

Drag and drop your answer to correctly complete the sentence.

The plane Sherine is watching is about 11



kilometers in the air.



1

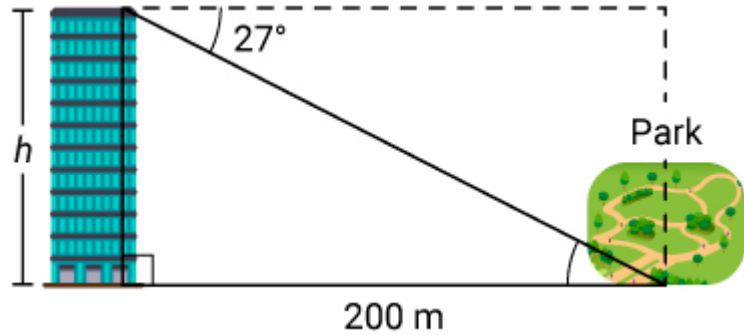
10

4

QUESTION 10



Muhammed is standing on the roof of his apartment complex. He sees a park 200 meters from the base of the apartment complex. He sees the park at an angle of depression of 27° .



. Find the approximate height of the apartment complex. Round your answer to the nearest whole meter.
Enter your answer in the space provided.

The height of the apartment complex is meters.

QUESTION 11

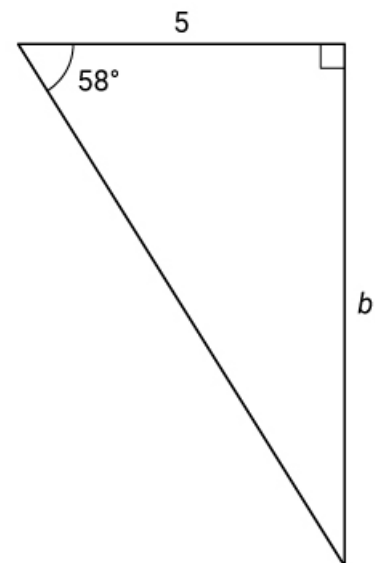


Find the value of b in the triangle shown. Round the answer to the nearest tenth.
Select your answer from the drop-down menu.

The value of

$b \approx$

✓ ▼



QUESTION 12



Find the value of a in the triangle shown. Round the answer to the nearest hundredth.

Drag and drop your answer to correctly complete the approximation.

$a \approx$

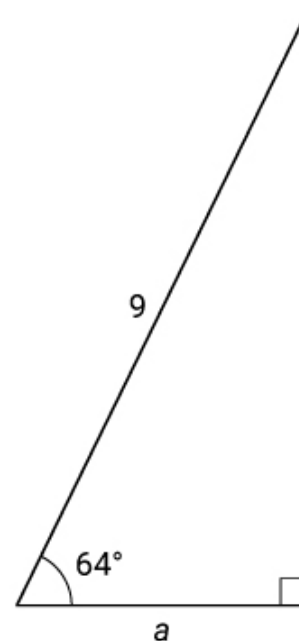
3.95



2.67

3.34

1.75



QUESTION 13



Find the value of c in the triangle shown. Round the answer to the nearest tenth.

Drag and drop your answer to correctly complete this approximation.

$c \approx$

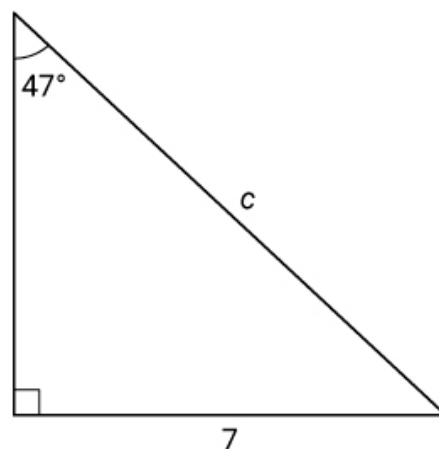
9.6



12.3

8.1

6.6



QUESTION 14

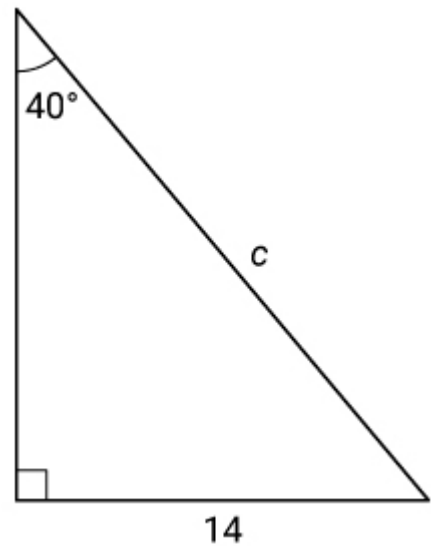


Find the value of c in the triangle shown. Round the answer to the nearest tenth.

Enter your answer in the space provided.

$c \approx$

21.8



QUESTION 15



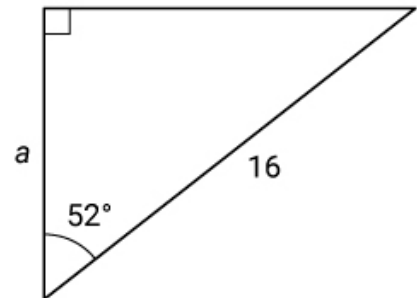
Find the value of a in the triangle shown. Round the answer to the nearest tenth.

Enter your answer in the space provided.

The value of

$a \approx$

9.9



QUESTION 16



In a right triangle,

θ

is an acute angle such that

$$\sin \theta = \frac{7}{12}$$

, what is the exact value of

$\cot \theta$

?

Select your answer from the drop-down menu.

$\cot \theta =$

$$\frac{\sqrt{95}}{7}$$

✓

▼

QUESTION 17



In a right triangle,

θ

is an acute angle such that

$$\sec \theta = \sqrt{2}$$

, what is the value of

$\tan \theta$

?

Select your answer from the drop-down menu.

$\tan \theta =$

1

✓

▼

QUESTION 18



θ

is an acute angle such that

$$\cos \theta = \frac{14\sqrt{221}}{221}$$

, what is the **exact** value of $\csc \theta$

?

Drag and drop your answer to correctly complete the equation.

$\csc \theta =$

$$\frac{\sqrt{221}}{5} \quad \checkmark$$

$$\frac{14\sqrt{221}}{5}$$

$$\frac{\sqrt{221}}{14}$$

$$\frac{5\sqrt{221}}{14}$$

QUESTION 19

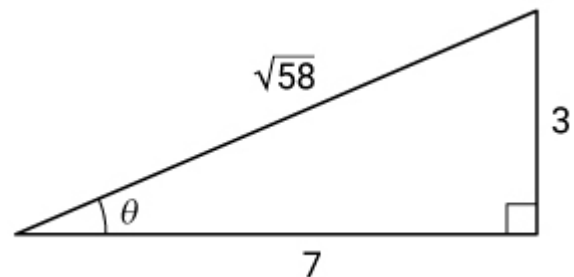


In this right triangle shown, what is the value of $\csc \theta$

?

Select your answer from the drop-down menu.

$\csc \theta =$

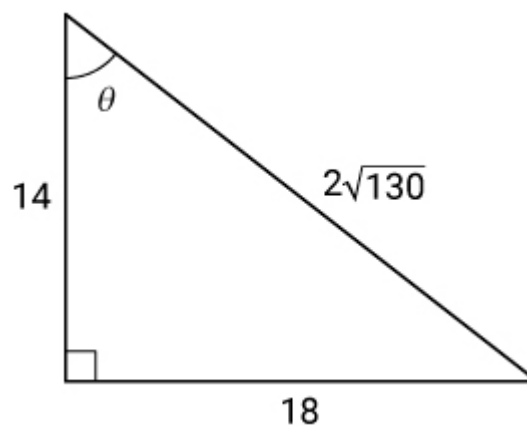


$$\frac{\sqrt{58}}{3} \quad \checkmark \quad \vee$$

QUESTION 20



What is the value of
 $\cot \theta$
in this triangle?



☐ $\frac{7\sqrt{130}}{65}$

☐ $\frac{\sqrt{130}}{9}$

☒ $\frac{7}{9}$



☐ $\frac{\sqrt{130}}{7}$

QUESTION 21

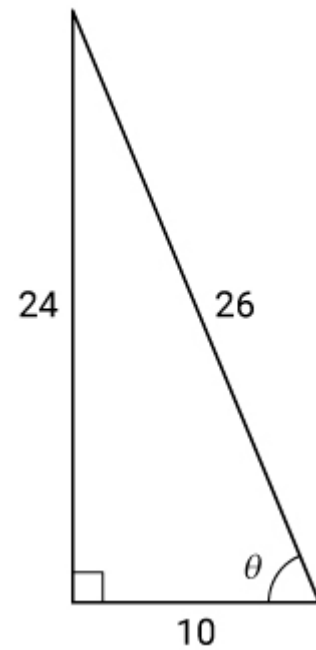


In this triangle, determine the value of $\sec \theta$

Enter your answer in the space provided.

$\sec \theta =$

$$\frac{13}{5}$$



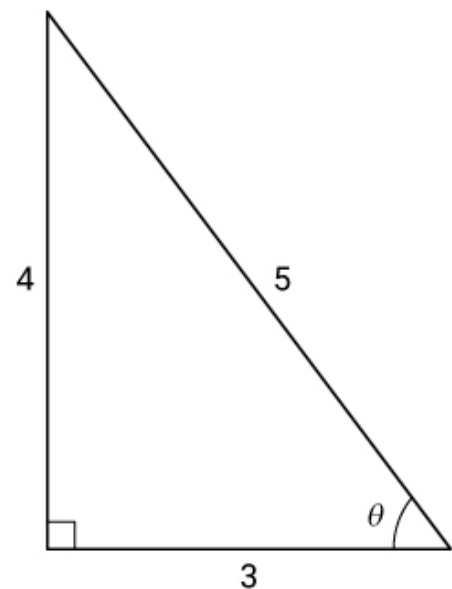
QUESTION 22



Complete the table with the respective trigonometric ratios for each trigonometric function.

Drag and drop your answers to correctly complete the table.

Trigonometric Function	Trigonometric Ratio
$\tan (\theta)$	$\frac{4}{3}$
$\sin (\theta)$	



	$\frac{4}{5}$
$\cos(\theta)$	$\frac{3}{5}$

$\frac{5}{3}$

$\frac{3}{4}$

$\frac{5}{4}$

QUESTION 23



In this right triangle, determine the trigonometric ratio for each trigonometric function.
Select your answers from the drop-down menus.

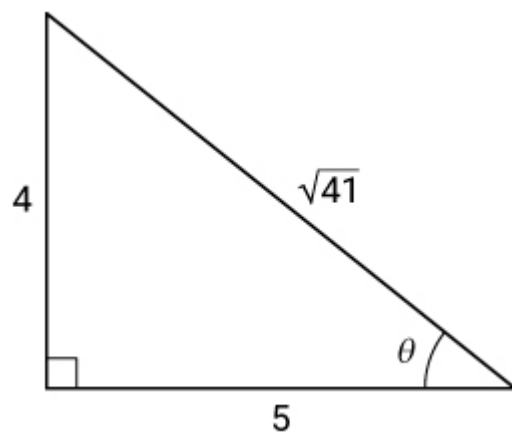
$\tan \theta =$

$\frac{4}{5}$ ✓ ▼

$\sin \theta =$

$\frac{4\sqrt{41}}{41}$ ✓ ▼

$\cos \theta =$



$$\frac{5\sqrt{41}}{41} \quad \checkmark \quad \blacktriangledown ,$$

$$\sec \theta =$$

$$\frac{\sqrt{41}}{5} \quad \checkmark \quad \blacktriangledown ,$$

$$\cot \theta =$$

$$\frac{5}{4} \quad \checkmark \quad \blacktriangledown .$$

QUESTION 24



Identify the trigonometric ratio for each trigonometric function.

Select your answers from the drop-down menus.

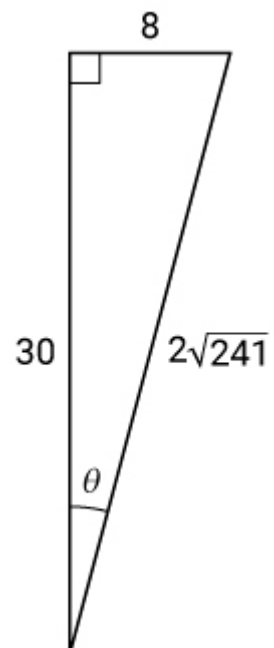
$$\csc (\theta) =$$

$$\frac{2\sqrt{241}}{8} \quad \checkmark \quad \blacktriangledown ,$$

$$\sec (\theta) =$$

$$\frac{2\sqrt{241}}{30} \quad \checkmark \quad \blacktriangledown$$

$$\tan (\theta) =$$



$$\frac{8}{30} \quad \checkmark \quad \blacktriangledown ,$$

$$\sin (\theta) =$$

$$\frac{4\sqrt{241}}{241} \quad \checkmark \quad \blacktriangledown ,$$

$$\cos (\theta) =$$

$$\frac{15\sqrt{241}}{241} \quad \checkmark \quad \blacktriangledown ,$$

$$\cot (\theta) =$$

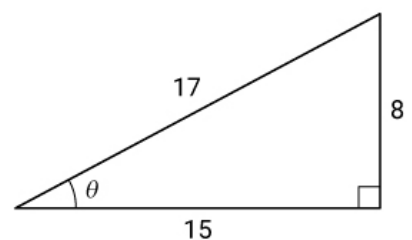
$$\frac{30}{8} \quad \checkmark \quad \blacktriangledown$$

QUESTION 25



Drag and drop each trigonometric function to the correct corresponding trigonometric ratio.

Trigonometric Ratio



$\frac{8}{15}$
$\frac{8}{17}$
$\frac{15}{17}$


QUESTION 26



In the triangle shown, what is the value of $\sin \theta$

?

Drag and drop your answer to correctly complete the equation.

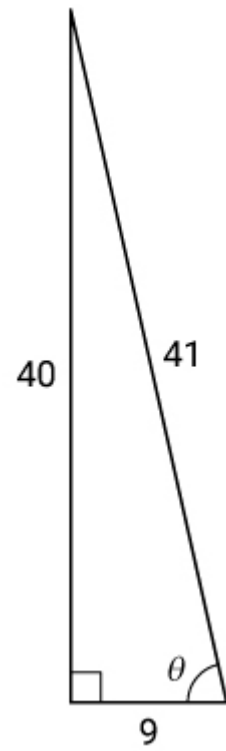
$\sin \theta =$

$\frac{40}{41}$


$$\frac{41}{9}$$

$$\frac{9}{41}$$

$$\frac{41}{40}$$



QUESTION 27

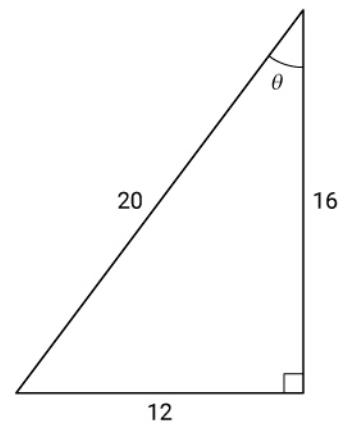


Drag and drop each trigonometric ratio to the correct trigonometric function.

t

c

<
>



QUESTION 28



In a right triangle,

θ

is an acute angle such that

$$\csc \theta = \frac{\sqrt{185}}{8}$$

, what is the exact value of

$\cos \theta$

?

Enter your answer in the space provided.

$\cos \theta =$

$$\frac{11\sqrt{185}}{185}$$



QUESTION 29



In a right triangle,

θ

is an acute angle such that

$$\sec \theta = \frac{\sqrt{29}}{5}$$

, what is the exact value of

$\sin \theta$

?



$$\frac{\sqrt{29}}{2}$$



$$\frac{2\sqrt{29}}{29}$$



$$\frac{5\sqrt{29}}{29}$$



$$\frac{\sqrt{29}}{5}$$

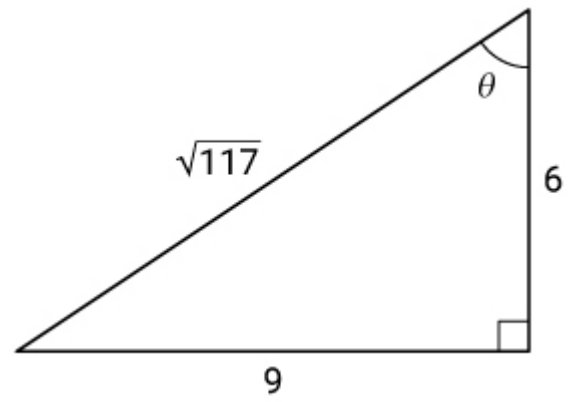
QUESTION 30



What is the value of

$\cos \theta$

in this triangle? Simplify your answer.



$$\frac{3\sqrt{13}}{13}$$



$$\frac{\sqrt{13}}{2}$$



$$\frac{\sqrt{13}}{3}$$



$$\frac{2\sqrt{13}}{13}$$

