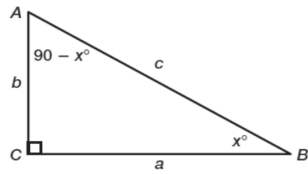


Complementary Angles in Right Triangles:

What does complementary mean?



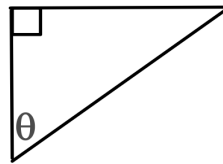
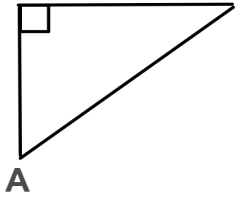
$$\sin A = \cos (90 - A)$$

or

$$\cos A = \sin (90 - A)$$

$$\sin \theta = \cos (90 - \theta)$$

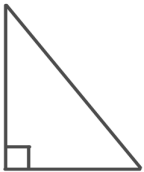
$$\cos \theta = \sin (90 - \theta)$$



Page 2

Example 5:

Angle T and J are complementary angles in a right triangle. The sine of Angle T is $\frac{12}{13}$, what is the sine of angle J?



Page 4

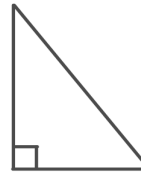
Find the missing Angle:

-
-
-
-

Page 3

Example 6:

Angle N and H are complementary angles in a right triangle. The cosine of Angle N is $\frac{15}{17}$, what is the cosine of angle H?



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7. Angle D and E are complementary angles. If $\sin D = \frac{p}{q}$, find the $\cos E$.

8. Angle R and S are complementary angles. If $\cos R = \frac{d}{e}$, find the $\sin S$.

9. In $\triangle ABC$, $m \angle B = 90^\circ$. For what value of x does $\sin(x - A) = \cos A$?

- A. 0°
- B. 45°
- C. 90°
- D. 180°

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How do you find trig ratios when you are given the information of another trig ratio?

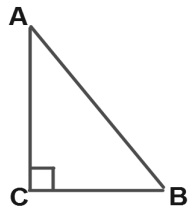
Step 1: Draw a Right Triangle and put in the given information

Step 2: Use Pythagorean Theorem to find the missing side length

Step 3: Find the asked for trig ratio using Soh Cah Toa

Example 14:

If the sine of Angle A is $\frac{2}{3}$, what is the cosine of angle B?



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10. Which of the following is equal to $\cos 35^\circ$?

- A. $\sin 35^\circ$
- B. $\sin 55^\circ$
- C. $\cos 55^\circ$
- D. $\sin 145^\circ$



11. Which of the following is equal to $\sin 50^\circ$?

- A. $\cos 50^\circ$
- B. $\sin 40^\circ$
- C. $\cos 40^\circ$
- D. $\cos 130^\circ$



12. Which of the following is equal to $\sin 15^\circ$?

- A. $\cos 15^\circ$
- B. $\sin 75^\circ$
- C. $\cos 75^\circ$
- D. $\sin 15^\circ$



13. Which of the following is equal to $\cos 60^\circ$?

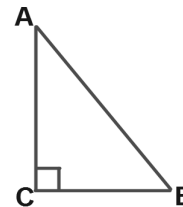
- A. $\sin 30^\circ$
- B. $\cos 30^\circ$
- C. $\sin 60^\circ$
- D. $\sin 120^\circ$



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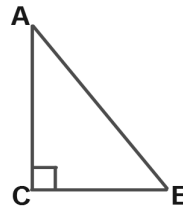
Example 15:

If the cosine of Angle A is $\frac{4}{5}$, what is the tangent of angle A?



Example 16:

If the tangent of Angle A is $\frac{4}{3}$, what is the cosine of angle A?



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