



Determine missing angles using inverse trigonometry

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Mnemonic for trigonometry ratios

A

Sohcahtoa

B

Somolomo

C

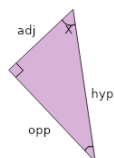
Sangrada

D

Serasera

3

In trigonometry, what's the fancy name for the ratio of the opposite side length over the adjacent side length (opp/adj)?



A Total

B Tangent

4

Tangent

A

$$\frac{opp}{adj}$$

B

$$adj \times opp$$

C

$$\frac{adj}{adj}$$

D

$$adj \times adj$$

E

$$opp \times hyp$$

F

$$\frac{adj}{hyp}$$

2

toa

A

$$\tan = adj \times hyp$$

B

$$\sin = hyp \times hyp$$

C

$$\tan = hyp \times opp$$

D

$$\tan = \frac{adj}{opp}$$

E

$$\tan = \frac{opp}{adj}$$

F

$$\tan = \frac{hyp}{hyp}$$

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Using the mnemonic SOHCAHTOA, select the trigonometry ratio that this is the definition of

$$\frac{adj}{hyp}$$

A

Cosine

B

Tangent

C

Sine

6

Solve for the angle in degrees given the values

$$\begin{aligned} adj &= 9 \\ hyp &= 12.7 \\ \lambda &=?^\circ \end{aligned}$$

A

$$\lambda = 25^\circ$$

B

$$\lambda = 30^\circ$$

C

$$\lambda = 45^\circ$$

D

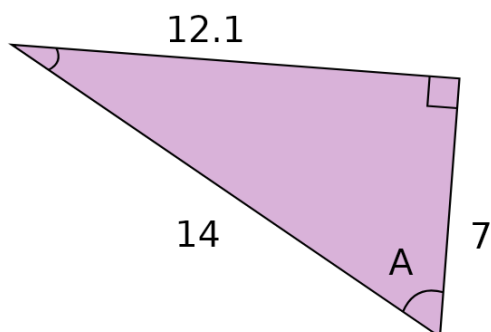
$$\lambda = 65^\circ$$



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Solve for the trigonometric ratio in fraction form



A $\sin(A) = \frac{12.1}{14}$

B $\sin(A) = \frac{14}{12.1}$

C $\sin(A) = 7 \times 12.1$

8

Solve for the trigonometry ratio given the values

$$adj = 4$$

$$opp = 2.8$$

$$hyp = 4.9$$

$$\sin(\theta) =$$

A $\sin(\theta) = 0.80$

B $\sin(\theta) = 0.26$

C $\sin(\theta) = 1.75$

D $\sin(\theta) = 0.57$

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How would you calculate the angle, using arc notation?

$$\tan(\alpha) = 3.078$$

A $\alpha = \frac{1}{\tan^{-1}(3.078)}$

B $\alpha = \frac{1}{\tan(3.078)}$

C $\alpha = \tan(3.078) - 1$

D $\alpha = \tan^{-1}(3.078)$

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How would you calculate the angle using arc notation?

$$\alpha \text{ has a sin of } 0.866$$

A $\alpha = \sin(0.866) - 1$

B $\alpha = \frac{1}{\sin(0.866)}$

C $\alpha = \sin(0.866)$

D $\alpha = \frac{1}{\sin^{-1}(0.866)}$



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How would you calculate the angle, using -1 notation?

$$\cos(\alpha) = 0.407$$

A

$$\alpha = \cos(0.407) - 1$$

B

$$\alpha = \frac{1}{\cos^{-1}(0.407)}$$

C

$$\alpha = \frac{1}{\text{acos}(0.407)}$$

D

$$\alpha = \cos^{-1}(0.407)$$

12

Calculate the angle in degrees, given the trigonometric ratio

$$\cos^{-1}(0.914) = \alpha$$

A

$$\alpha = 29^\circ$$

B

$$\alpha = 14^\circ$$

C

$$\alpha = 34^\circ$$

D

$$\alpha = 24^\circ$$

E

$$\alpha = 44^\circ$$

F

$$\alpha = 4^\circ$$

13

What angle (in degrees) has this ratio of sides?

$$\frac{\text{opp}}{\text{hyp}} = \frac{5.44}{6}$$

A 65 deg

B 85 deg

C 50 deg

D 60 deg

E 70 deg

F 55 deg

14

Solve for the angle in degrees with trigonometry



A

$$A = 25^\circ$$

B

$$A = 10^\circ$$

C

$$A = 45^\circ$$

D

$$A = 30^\circ$$

15

What angle (in degrees) has this ratio of sides?

$$\frac{\text{opp}}{\text{adj}} = 0.268$$

A 0 deg

B 20 deg

C 15 deg

D 25 deg

E 30 deg

F 35 deg