

The Secret of Pre Calculus Section 5 2 SOHCAHTOA and The Reciprocal Form

Lesson 183 | Precalculus | Right-triangle trigonometry

<https://www.youtube.com/watch?v=BXMQL00bli8>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

In a right triangle, acute angle θ has opposite leg 44 and adjacent leg 24. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

02

In a right triangle, acute angle θ has opposite leg 54 and adjacent leg 66. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

03

In a right triangle, acute angle θ has opposite leg 65 and adjacent leg 45. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

The Secret of Pre Calculus Section 5 2 SOHCAHTOA and The Reciprocal Form

Lesson 183 | Precalculus | Right-triangle trigonometry

<https://www.youtube.com/watch?v=BXMQL00bli8>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

04

In a right triangle, acute angle θ has opposite leg 16 and adjacent leg 14. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

05

In a right triangle, acute angle θ has opposite leg 30 and adjacent leg 72. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

06

In a right triangle, acute angle θ has opposite leg 54 and adjacent leg 18. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

The Secret of Pre Calculus Section 5 2 SOHCAHTOA and The Reciprocal Form

Lesson 183 | Precalculus | Right-triangle trigonometry

<https://www.youtube.com/watch?v=BXMQL00bli8>

Original practice aligned to the saved video title.

01

In a right triangle, acute angle θ has opposite leg 44 and adjacent leg 24. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $4\sqrt{157}$. $\sin \theta = 11/\sqrt{157}$; $\cos \theta = 6/\sqrt{157}$; $\tan \theta = 11/6$; $\csc \theta = \sqrt{157}/11$; $\sec \theta = \sqrt{157}/6$; $\cot \theta = 6/11$. $\theta = \arctan(11/6) \approx 61.4^\circ$.

02

In a right triangle, acute angle θ has opposite leg 54 and adjacent leg 66. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $6\sqrt{202}$. $\sin \theta = 9/\sqrt{202}$; $\cos \theta = 11/\sqrt{202}$; $\tan \theta = 9/11$; $\csc \theta = \sqrt{202}/9$; $\sec \theta = \sqrt{202}/11$; $\cot \theta = 11/9$. $\theta = \arctan(9/11) \approx 39.3^\circ$.

03

In a right triangle, acute angle θ has opposite leg 65 and adjacent leg 45. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $5\sqrt{250}$. $\sin \theta = 13/\sqrt{250}$; $\cos \theta = 9/\sqrt{250}$; $\tan \theta = 13/9$; $\csc \theta = \sqrt{250}/13$; $\sec \theta = \sqrt{250}/9$; $\cot \theta = 9/13$. $\theta = \arctan(13/9) \approx 55.3^\circ$.

The Secret of Pre Calculus Section 5 2 SOHCAHTOA and The Reciprocal Form

Lesson 183 | Precalculus | Right-triangle trigonometry

<https://www.youtube.com/watch?v=BXMQL00bli8>

Original practice aligned to the saved video title.

04

In a right triangle, acute angle θ has opposite leg 16 and adjacent leg 14. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $2\sqrt{113}$. $\sin \theta = 8/\sqrt{113}$; $\cos \theta = 7/\sqrt{113}$; $\tan \theta = 8/7$; $\csc \theta = \sqrt{113}/8$; $\sec \theta = \sqrt{113}/7$; $\cot \theta = 7/8$. $\theta = \arctan(8/7) \approx 48.8^\circ$.

05

In a right triangle, acute angle θ has opposite leg 30 and adjacent leg 72. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $6\sqrt{169}$. $\sin \theta = 5/\sqrt{169}$; $\cos \theta = 12/\sqrt{169}$; $\tan \theta = 5/12$; $\csc \theta = \sqrt{169}/5$; $\sec \theta = \sqrt{169}/12$; $\cot \theta = 12/5$. $\theta = \arctan(5/12) \approx 22.6^\circ$.

06

In a right triangle, acute angle θ has opposite leg 54 and adjacent leg 18. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $6\sqrt{90}$. $\sin \theta = 9/\sqrt{90}$; $\cos \theta = 3/\sqrt{90}$; $\tan \theta = 9/3$; $\csc \theta = \sqrt{90}/9$; $\sec \theta = \sqrt{90}/3$; $\cot \theta = 3/9$. $\theta = \arctan(9/3) \approx 71.6^\circ$.