

Welcome to high school 2021 Trigonometry SohCahToa (Big Idea Geometry 9 4,9 5)

Lesson 067 | Geometry | Right-triangle trigonometry

<https://www.youtube.com/watch?v=1qrjDw3Dnz4>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

In a right triangle, acute angle θ has opposite leg 10 and adjacent leg 70. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

02

In a right triangle, acute angle θ has opposite leg 22 and adjacent leg 10. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

03

In a right triangle, acute angle θ has opposite leg 22 and adjacent leg 28. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Welcome to high school 2021 Trigonometry SohCahToa (Big Idea Geometry 9 4,9 5)

Lesson 067 | Geometry | Right-triangle trigonometry

<https://www.youtube.com/watch?v=1qrjDw3Dnz4>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

04

In a right triangle, acute angle θ has opposite leg 15 and adjacent leg 39. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

05

In a right triangle, acute angle θ has opposite leg 42 and adjacent leg 36. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

06

In a right triangle, acute angle θ has opposite leg 40 and adjacent leg 12. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Welcome to high school 2021 Trigonometry SohCahToa (Big Idea Geometry 9 4,9 5)

Lesson 067 | Geometry | Right-triangle trigonometry

<https://www.youtube.com/watch?v=1qrjDw3Dnz4>

Original practice aligned to the saved video title.

01

In a right triangle, acute angle θ has opposite leg 10 and adjacent leg 70. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $5\sqrt{200}$. $\sin \theta = 2/\sqrt{200}$; $\cos \theta = 14/\sqrt{200}$; $\tan \theta = 2/14$; $\csc \theta = \sqrt{200}/2$; $\sec \theta = \sqrt{200}/14$; $\cot \theta = 14/2$. $\theta = \arctan(2/14) \approx 8.1^\circ$.

02

In a right triangle, acute angle θ has opposite leg 22 and adjacent leg 10. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $2\sqrt{146}$. $\sin \theta = 11/\sqrt{146}$; $\cos \theta = 5/\sqrt{146}$; $\tan \theta = 11/5$; $\csc \theta = \sqrt{146}/11$; $\sec \theta = \sqrt{146}/5$; $\cot \theta = 5/11$. $\theta = \arctan(11/5) \approx 65.6^\circ$.

03

In a right triangle, acute angle θ has opposite leg 22 and adjacent leg 28. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $2\sqrt{317}$. $\sin \theta = 11/\sqrt{317}$; $\cos \theta = 14/\sqrt{317}$; $\tan \theta = 11/14$; $\csc \theta = \sqrt{317}/11$; $\sec \theta = \sqrt{317}/14$; $\cot \theta = 14/11$. $\theta = \arctan(11/14) \approx 38.2^\circ$.

Welcome to high school 2021 Trigonometry SohCahToa (Big Idea Geometry 9 4,9 5)

Lesson 067 | Geometry | Right-triangle trigonometry

<https://www.youtube.com/watch?v=1qrjDw3Dnz4>

Original practice aligned to the saved video title.

04

In a right triangle, acute angle θ has opposite leg 15 and adjacent leg 39. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $3\sqrt{194}$. $\sin \theta = 5/\sqrt{194}$; $\cos \theta = 13/\sqrt{194}$; $\tan \theta = 5/13$; $\csc \theta = \sqrt{194}/5$; $\sec \theta = \sqrt{194}/13$; $\cot \theta = 13/5$. $\theta = \arctan(5/13) \approx 21.0^\circ$.

05

In a right triangle, acute angle θ has opposite leg 42 and adjacent leg 36. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $3\sqrt{340}$. $\sin \theta = 14/\sqrt{340}$; $\cos \theta = 12/\sqrt{340}$; $\tan \theta = 14/12$; $\csc \theta = \sqrt{340}/14$; $\sec \theta = \sqrt{340}/12$; $\cot \theta = 12/14$. $\theta = \arctan(14/12) \approx 49.4^\circ$.

06

In a right triangle, acute angle θ has opposite leg 40 and adjacent leg 12. Find the hypotenuse, all six trig ratios, and θ to 0.1° .

Hypotenuse = $4\sqrt{109}$. $\sin \theta = 10/\sqrt{109}$; $\cos \theta = 3/\sqrt{109}$; $\tan \theta = 10/3$; $\csc \theta = \sqrt{109}/10$; $\sec \theta = \sqrt{109}/3$; $\cot \theta = 3/10$. $\theta = \arctan(10/3) \approx 73.3^\circ$.