



Apply Pythagorean identities

- 1** Is this pythagorean trig identity correct?

$$\sin^2\left(\frac{4\pi}{3}\right) = 1 - \cos^2\left(\frac{4\pi}{3}\right)$$

A

Yes

B

No

- 2** Is this pythagorean trig identity correct?

$$\tan^2(240^\circ) = \sec^2(240^\circ) - 1$$

A

Yes

B

No

- 3** Is this pythagorean trig identity correct?

$$\cot^2(\gamma) = 1 - \csc^2(\gamma)$$

A

No

B

Yes

- 4** Simplify this expression using trig identities

A

$$\tan^2(\gamma)$$

B

$$\sin^2(\gamma)$$

C

$$\sec^2(\gamma)$$

- 5** Simplify this expression using trig identities

$$\cos^2(\beta)(\cot^2(\beta) + 1)$$

A

$$\cot^2(\beta)$$

B

$$\tan^2(\beta)$$

C

$$1$$

- 6** Solve for cosecant from cotangent using trig identities

A

$$\csc(\theta) = -5\sqrt{2}$$

B

$$\csc(\theta) = 5\sqrt{2}$$



Apply Pythagorean identities

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Solve for sine from cosine using trig identities

A

$$\sin(\alpha) = \frac{\sqrt{55}}{2\sqrt{19}}$$

B

$$\sin(\alpha) = \frac{\sqrt{55}}{8}$$

8

Solve for sine from cosine using trig identities

A

$$\sin(\theta) = \frac{\sqrt{3}}{2}$$

B

$$\sin(\theta) = -\frac{\sqrt{3}}{2}$$

9

Simplify this expression using trig identities

A

$$\csc^2(\theta)$$

B

$$\cos^2(\theta)$$

C

$$\tan^2(\theta)$$

10

Simplify this expression using trig identities

A

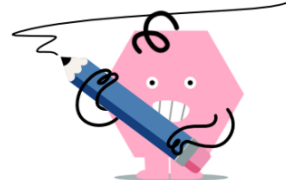
$$\csc^2(\alpha)$$

B

$$\sin^2(\alpha)$$

C

$$\sec^2(\alpha)$$



Apply Pythagorean identities

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Solve for cotangent from cosecant using trig identities

A

$$\cot(\beta) = 4\sqrt{3}$$

B

$$\cot(\beta) = \frac{4\sqrt{3}}{\sqrt{5}}$$

12

Solve for secant from tangent using trig identities

A

$$\sec(\beta) = \frac{\sqrt{10}}{3}$$

B

$$\sec(\beta) = \sqrt{10}$$

13

Solve for cotangent from cosecant using trig identities

A

$$\cot(\beta) = -4\sqrt{3}$$

B

$$\cot(\beta) = -2\sqrt{11}$$

14

Solve for cosecant from cotangent using trig identities

A

$$\csc(\alpha) = \sqrt{37}$$

B

$$\csc(\alpha) = -\sqrt{37}$$



Apply Pythagorean identities

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Solve for secant from tangent using trig identities

A

$$\sec(\gamma) = -5\sqrt{13}$$

B

$$\sec(\gamma) = 5\sqrt{13}$$

16

Solve for secant from tangent using trig identities

A

$$\sec(\alpha) = \sqrt{257}$$

B

$$\sec(\alpha) = \sqrt{217}$$

17

Solve for secant from tangent using trig identities

A

$$\sec(\theta) = \sqrt{37}$$

B

$$\sec(\theta) = -\sqrt{37}$$

18

Solve for tangent from secant using trig identities

A

$$\tan(\alpha) = -3\sqrt{7}$$

B

$$\tan(\alpha) = 3\sqrt{7}$$