

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

1 Solve for cosine from sine using trig identities

A

$$\cos(\beta) = \frac{\sqrt{21}}{5}$$

B

$$\cos(\beta) = \frac{\sqrt{5}}{5}$$

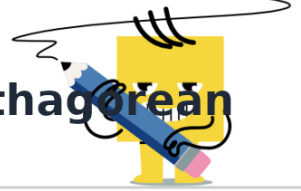
2 Solve for cosine from sine using trig identities

A

$$\cos(\alpha) = \frac{2\sqrt{17}}{7}$$

B

$$\cos(\alpha) = \frac{4\sqrt{3}}{7}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

3 Solve for cosine from sine using trig identities

A

$$\cos(\alpha) = -\frac{\sqrt{15}}{4}$$

B

$$\cos(\alpha) = \frac{\sqrt{15}}{4}$$

4 Solve for sine from cosine using trig identities

A

$$\sin(\alpha) = -\frac{3}{5}$$

B

$$\sin(\alpha) = -\frac{\sqrt{21}}{5}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

5 Solve for sine from cosine using trig identities

A

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

B

$$\sin(\theta) = -\frac{2\sqrt{2}}{\sqrt{17}}$$

6 Solve for sine from cosine using trig identities

A

$$\sin(\gamma) = \frac{\sqrt{5}}{3}$$

B

$$\sin(\gamma) = \frac{\sqrt{13}}{3}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

7 Solve for cosine from sine using trig identities

A

$$\cos(\gamma) = -\frac{2\sqrt{2}}{6}$$

B

$$\cos(\gamma) = -\frac{\sqrt{11}}{6}$$

8 Solve for cosine from sine using trig identities

A

$$\cos(\theta) = \frac{2\sqrt{3}}{7}$$

B

$$\cos(\theta) = \frac{2\sqrt{6}}{7}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

9 Solve for cosine from sine using trig identities

A

$$\cos(\alpha) = \frac{\sqrt{7}}{4}$$

B

$$\cos(\alpha) = -\frac{\sqrt{7}}{4}$$

10 Solve for sine from cosine using trig identities

A

$$\sin(\theta) = \frac{\sqrt{65}}{9}$$

B

$$\sin(\theta) = -\frac{\sqrt{65}}{9}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****11** Solve for sine from cosine using trig identities

A

$$\sin(\theta) = -\frac{4}{5}$$

B

$$\sin(\theta) = \frac{4}{5}$$

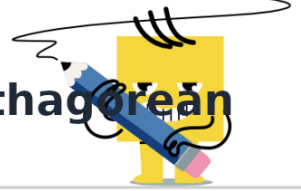
12 Solve for sine from cosine using trig identities

A

$$\sin(\theta) = \frac{2\sqrt{2}}{7}$$

B

$$\sin(\theta) = \frac{\sqrt{13}}{7}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****13** Solve for secant from tangent using trig identities

A

$$\sec(\gamma) = \sqrt{170}$$

B

$$\sec(\gamma) = \sqrt{145}$$

14 Solve for secant from tangent using trig identities

A

$$\sec(\theta) = 6\sqrt{5}$$

B

$$\sec(\theta) = \sqrt{170}$$

15 Solve for secant from tangent using trig identities

A

$$\sec(\alpha) = \sqrt{170}$$

B

$$\sec(\alpha) = -\sqrt{170}$$

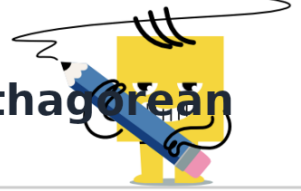
16 Solve for tangent from secant using trig identities

A

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

B

$$\tan(\alpha) = 1$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****17** Solve for tangent from secant using trig identities

A

$$\tan(\theta) = -\sqrt{3}$$

B

$$\tan(\theta) = \sqrt{3}$$

18 Solve for tangent from secant using trig identities

A

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

B

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

19 Solve for secant from tangent using trig identities

A

$$\sec(\theta) = \sqrt{65}$$

B

$$\sec(\theta) = \frac{\sqrt{65}}{2}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****20** Solve for secant from tangent using trig identities

A

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

B

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

21 Solve for secant from tangent using trig identities

A

$$\sec(\alpha) = -\sqrt{55}$$

B

$$\sec(\alpha) = -5\sqrt{2}$$

22 Solve for tangent from secant using trig identities

A

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

B

$$\tan(\beta) = -2\sqrt{10}$$

23 Solve for tangent from secant using trig identities

A

$$\tan(\alpha) = 4\sqrt{5}$$

B

$$\tan(\alpha) = \sqrt{94}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****24** Solve for tangent from secant using trig identities

A

$$\tan(\beta) = 2\sqrt{6}$$

B

$$\tan(\beta) = 2$$

25 Solve for cosecant from cotangent using trig identities

A

$$\csc(\beta) = -\sqrt{2}$$

B

$$\csc(\beta) = \sqrt{2}$$

26 Solve for cosecant from cotangent using trig identities

A

$$\csc(\gamma) = \sqrt{226}$$

B

$$\csc(\gamma) = -\sqrt{226}$$

27 Solve for cosecant from cotangent using trig identities

A

$$\csc(\beta) = -\sqrt{362}$$

B

$$\csc(\beta) = \sqrt{362}$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****28** Solve for cotangent from cosecant using trig identities

A

$$\cot(\gamma) = 4\sqrt{6}$$

B

$$\cot(\gamma) = 4\sqrt{5}$$

29 Solve for cotangent from cosecant using trig identities

A

$$\cot(\gamma) = 8$$

B

$$\cot(\gamma) = 4\sqrt{5}$$

30 Solve for cotangent from cosecant using trig identities

A

$$\cot(\alpha) = \sqrt{15}$$

B

$$\cot(\alpha) = -\sqrt{15}$$

31 Solve for cosecant from cotangent using trig identities

A

$$\csc(\alpha) = -5\sqrt{13}$$

B

$$\csc(\alpha) = -15$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****32** Solve for cosecant from cotangent using trig identities

A

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

B

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

33 Solve for cosecant from cotangent using trig identities

A

$$\csc(\gamma) = -\sqrt{113}$$

B

$$\csc(\gamma) = -\sqrt{145}$$

34 Solve for cotangent from cosecant using trig identities

A

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

B

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

**Trigonometry Identity Problems (Pythagorean Identities) - Practice****35** Solve for cotangent from cosecant using trig identities

A

$$\cot(\theta) = -\sqrt{35}$$

B

$$\cot(\theta) = -\frac{\sqrt{35}}{\sqrt{6}}$$

36 Solve for cotangent from cosecant using trig identities

A

$$\cot(\gamma) = 2\sqrt{2}$$

B

$$\cot(\gamma) = -2\sqrt{2}$$

37 Simplify this expression using trig identities

$$\left(\frac{\sin^2(\gamma)}{\cos^2(\gamma)}\right)(1 - \sin^2(\gamma))$$

A

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

B

$$\csc^2(\gamma)$$

C

$$\cot^2(\gamma)$$

38 Simplify this expression using trig identities

$$(\cot^2(\gamma))(1 - \cos^2(\gamma))$$

A

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

B

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

C

$$\cos^2(\gamma)$$

**Trigonometry Identity Problems (Pythagorean Identities) - Practice**

39 Simplify this expression using trig identities

A

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

B

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

C

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

40 Simplify this expression using trig identities

A

$$\sin^2(\beta)$$

B

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

C

$$\cos^2(\beta)$$