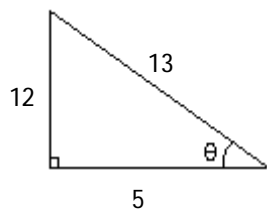


Use the figure to find the exact value of the trigonometric function.

1) Find $\cos 2\theta$.

1) _____



A) $-\frac{119}{169}$

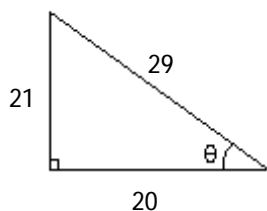
B) $-\frac{9}{13}$

C) $\frac{120}{169}$

D) $\frac{119}{169}$

2) Find $\sin 2\theta$.

2) _____



A) $-\frac{40}{841}$

B) $\frac{41}{841}$

C) $-\frac{41}{841}$

D) $\frac{840}{841}$

Use the given information to find the exact value of the expression.

3) $\sin \theta = \frac{12}{13}$, θ lies in quadrant I Find $\cos 2\theta$.

3) _____

A) $-\frac{121}{169}$

B) $-\frac{119}{169}$

C) $\frac{120}{169}$

D) $\frac{119}{169}$

4) $\cos \theta = \frac{4}{5}$, θ lies in quadrant IV Find $\sin 2\theta$.

4) _____

A) $\frac{24}{25}$

B) $\frac{7}{25}$

C) $-\frac{7}{25}$

D) $-\frac{24}{25}$

Write the expression as the sine, cosine, or tangent of a double angle. Then find the exact value of the expression.

5) $2 \sin 75^\circ \cos 75^\circ$

5) _____

A) $-\frac{1}{2}$

B) $\frac{\sqrt{3}}{2}$

C) $\frac{1}{2}$

D) $-\frac{\sqrt{3}}{2}$

6) $\cos^2 60^\circ - \sin^2 60^\circ$

6) _____

A) $-\frac{\sqrt{3}}{2}$

B) $\frac{\sqrt{3}}{2}$

C) $\frac{1}{2}$

D) $-\frac{1}{2}$

Complete the identity.

7) $(\sin x + \cos x)^2 = ?$

A) $\sin 2x$

B) $1 - \cos 2x$

C) $1 + \sin 2x$

D) $1 + \cos 2x$

7) _____

Rewrite the expression as an equivalent expression that does not contain powers of trigonometric functions greater than 1.

8) $8 \cos^2 x$

A) $16 \cos x$

B) $4 + 4 \cos 2x$

C) $1 + \cos 2x$

D) $4 - 4 \cos 2x$

8) _____

9) $\sin^4 x$

A) $\frac{3}{2} - \frac{3}{2} \cos 2x$

B) $\frac{3}{2} - 2 \cos 2x + \frac{1}{2} \cos 4x$

C) $\frac{3}{8} + \frac{5}{8} \cos 2x$

D) $\frac{3}{8} - \frac{1}{2} \cos 2x + \frac{1}{8} \cos 4x$

9) _____

10) $\cos^4 x$

A) $\frac{3 - 4 \cos 2x + \cos 4x}{8}$

B) $\frac{2 - 4 \cos 2x + \cos 4x}{8}$

C) $\frac{3 + 4 \cos 2x + \cos 4x}{8}$

D) $\frac{3 + 2 \cos 2x + \cos 4x}{8}$

10) _____

11) $\cos^3 x$

A) $\frac{3}{4} \cos x + \frac{1}{4} \cos 3x + \cos 2x$

B) $\frac{3}{4} \cos x - \frac{1}{4} \cos 3x$

C) $\frac{3}{4} \cos x + \frac{1}{4} \cos 3x$

D) $\frac{3}{4} \cos x - \frac{1}{4} \cos 3x - \cos 2x$

11) _____

Use a half-angle formula to find the exact value of the expression.

12) $\sin 15^\circ$

A) $\frac{1}{2} \sqrt{2 - \sqrt{3}}$

B) $-\frac{1}{2} \sqrt{2 + \sqrt{3}}$

C) $-\frac{1}{2} \sqrt{2 - \sqrt{3}}$

D) $\frac{1}{2} \sqrt{2 + \sqrt{3}}$

12) _____

13) $\cos \frac{5\pi}{12}$

A) $-\frac{1}{2} \sqrt{2 + \sqrt{3}}$

B) $-\frac{1}{2} \sqrt{2 - \sqrt{3}}$

C) $\frac{1}{2} \sqrt{2 - \sqrt{3}}$

D) $\frac{1}{2} \sqrt{2 + \sqrt{3}}$

13) _____

Use the given information to find the exact value of the trigonometric function.

14) $\sin \theta = \frac{1}{4}$, θ lies in quadrant I Find $\sin \frac{\theta}{2}$.

A) $\frac{\sqrt{8 + 2\sqrt{15}}}{4}$

B) $\frac{\sqrt{10}}{4}$

C) $\frac{\sqrt{8 - 2\sqrt{15}}}{4}$

D) $\frac{\sqrt{6}}{4}$

14) _____

15) $\sec \theta = 4$, θ lies in quadrant I Find $\cos \frac{\theta}{2}$.

A) $\frac{\sqrt{8 + 2\sqrt{15}}}{4}$

B) $\frac{\sqrt{8 - 2\sqrt{15}}}{4}$

C) $\frac{\sqrt{6}}{4}$

D) $\frac{\sqrt{10}}{4}$

15) _____

Answer Key

Testname: PRACTICE11

- 1) A
- 2) D
- 3) B
- 4) D
- 5) C
- 6) D
- 7) C
- 8) B
- 9) D
- 10) C
- 11) C
- 12) A
- 13) C
- 14) C
- 15) D