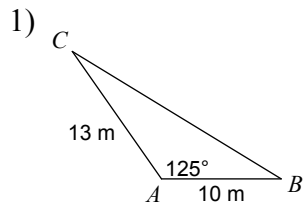


Trig review

Date _____ Period _____

Find the area of each triangle to the nearest tenth.

- A) 106.5 m² B) 26 m²
C) 53.2 m² D) 191.6 m²

Find the amplitude.

2) $y = 9\cos 2\theta$

- A) 7 B) 1
C) $\frac{1}{6}$ D) 9

Find the period in radians.

3) $y = 8\sin\left(3\theta + \frac{\pi}{2}\right) + 3$

- A) 8π B) $\frac{2\pi}{3}$
C) 14π D) 10π

Find the vertical shift.

4) $y = 10\cos\left(\frac{\theta}{5} - \frac{\pi}{2}\right) - 1$

- A) Up 5 B) Down 5
C) Up 1 D) Down 1

Find the phase shift in radians.

5) $y = 8\sin 6\theta$

- A) Left $\frac{5\pi}{18}$ B) Left $\frac{5\pi}{12}$
C) None D) Left $\frac{\pi}{28}$

Solve each equation for $0 \leq \theta < 2\pi$.

6) $-\sin^2 \theta + \sin \theta + 1 = \sin^2 \theta$

- A) $\left\{ \frac{\pi}{2}, \frac{7\pi}{6}, \frac{11\pi}{6} \right\}$
B) $\left\{ \frac{\pi}{6}, \frac{\pi}{2}, \frac{7\pi}{6}, \frac{3\pi}{2} \right\}$
C) $\left\{ \frac{7\pi}{6}, \frac{11\pi}{6} \right\}$
D) $\left\{ \frac{\pi}{4}, \frac{5\pi}{4} \right\}$

7) $\csc \theta \tan \theta + \sqrt{3} \csc \theta + 2 \tan \theta = 2 \tan \theta$

- A) $\left\{ \frac{2\pi}{3}, \frac{3\pi}{2}, \frac{5\pi}{3} \right\}$ B) $\left\{ \frac{2\pi}{3}, \frac{5\pi}{3} \right\}$
C) $\left\{ \frac{\pi}{2}, \frac{2\pi}{3}, \frac{3\pi}{2}, \frac{5\pi}{3} \right\}$ D) $\left\{ \frac{\pi}{6}, \frac{5\pi}{3} \right\}$

Find the exact value of each expression.

8) $\tan^{-1} \left(\cot \frac{2\pi}{3} \right)$

- A) $-\frac{\pi}{4}$ B) $\frac{\pi}{2}$
C) π D) $-\frac{\pi}{6}$

9) $\cot \cos^{-1} \frac{3}{5}$

- A) $-\frac{\pi}{2}$ B) $-\frac{\pi}{4}$
C) 0 D) $\frac{3}{4}$

Write each trigonometric expression as an algebraic expression.

10) $\cos \tan^{-1} x$

- A) $\frac{x}{\sqrt{1-x^2}}$ B) $\frac{1}{\sqrt{1+x^2}}$
C) $\frac{x}{\sqrt{1+x^2}}$ D) $\sqrt{1-x^2}$

11) $\sec \cos^{-1} x$

- A) $\sqrt{1-x^2}$ B) $\sqrt{1+x^2}$
C) $\frac{1}{x}$ D) $\frac{1}{\sqrt{1-x^2}}$

Verify each identity.

12) $\sin\left(\theta + \frac{\pi}{2}\right) = \cos \theta$

A) $\sin\left(\theta + \frac{\pi}{2}\right)$
 $= \cos \theta \sin \theta - \cos \frac{\pi}{2} \sin \frac{\pi}{2}$
 $= \cos \theta \sin \theta - 0 \cdot 1$
 $= \cos \theta$

B) $\sin\left(\theta + \frac{\pi}{2}\right)$
 $= \cos \theta \cos \frac{\pi}{2} - \sin \theta \sin \frac{\pi}{2}$
 $= \cos \theta \cdot 0 - \sin \theta \cdot 1$
 $= \cos \theta$

C) $\sin\left(\theta + \frac{\pi}{2}\right)$
 $= \sin \theta \cos \frac{\pi}{2} + \cos \theta \sin \frac{\pi}{2}$
 $= \sin \theta \cdot 0 + \cos \theta \cdot 1$
 $= \cos \theta$

D) $\sin\left(\theta + \frac{\pi}{2}\right)$
 $= \cos \theta \cos \frac{\pi}{2} - \sin \theta \sin \frac{\pi}{2}$
 $= \cos \theta \cdot 1 - \sin \theta \cdot 1$
 $= \cos \theta$

13) $\cos(\pi + \theta) = -\cos \theta$

A) $\cos(\pi + \theta)$
 $= \cos \pi \cos \theta - \sin \pi \sin \theta$
 $= -\cos \theta - 0 \sin \theta$
 $= -\cos \theta$

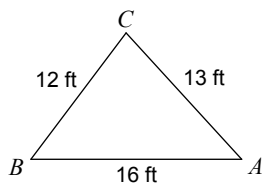
B) $\cos(\pi + \theta)$
 $= \sin \pi \cos \pi + \cos \theta \sin \theta$
 $= 0 \cdot -1 + \cos \theta \sin \theta$
 $= -\cos \theta$

C) $\cos(\pi + \theta)$
 $= \sin \pi \cos \theta + \cos \pi \sin \theta$
 $= 0 \cos \theta - \sin \theta$
 $= -\cos \theta$

D) $\cos(\pi + \theta)$
 $= \sin \pi \cos \theta + \cos \pi \sin \theta$
 $= -\cos \theta + \sin \theta$
 $= -\cos \theta$

Solve each triangle. Round your answers to the nearest tenth.

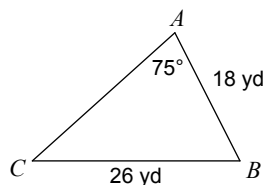
14)



- A) $m\angle C = 79.5^\circ$, $m\angle A = 47.5^\circ$, $m\angle B = 53^\circ$
- B) $m\angle C = 71.6^\circ$, $m\angle A = 51^\circ$, $m\angle B = 57.4^\circ$
- C) $m\angle C = 69.6^\circ$, $m\angle A = 46^\circ$, $m\angle B = 64.4^\circ$
- D) $m\angle C = 69.6^\circ$, $m\angle A = 43.7^\circ$, $m\angle B = 66.7^\circ$

Find each measurement indicated. Round your answers to the nearest tenth.

15) Find $m\angle C$



- A) 45° B) 37°
- C) 42° D) 41°

Answers to Trig review (ID: 1)

1) C
5) C
9) D
13) A

2) D
6) A
10) B
14) A

3) B
7) B
11) C
15) C

4) D
8) D
12) C