

Accelerated Pre-Calculus
Unit 1 Intro to Trig Test 2018

- What is 245° in radians?
A. $49\pi/180$ B. $36\pi/49$ C. $49\pi/36$ D. 245π
 - What is the value of $\cos(-90^\circ)$?
A. 0 B. 1 C. -1 D. $1/2$
 - If $\tan(x) = 3/4$, what is the value of $\sec(x)$?
A. $5/3$ B. $5/4$ C. $3/5$ D. $4/5$
 - If the tangent of an angle is positive and the cosine is negative, in what quadrant does the angle terminate?
A. I B. II C. III D. IV
 - At what point on the Unit Circle does 120° lie?
A. $(-1/2, \sqrt{3}/2)$ B. $(1/2, \sqrt{3}/2)$ C. $(\sqrt{3}/2, 1/2)$ D. $(-\sqrt{3}/2, -1/2)$
 - Which expression is NOT equivalent to $\cos 30^\circ$?
A. $\cos 330^\circ$ B. $-\cos 150^\circ$ C. $\sin 120^\circ$ D. $-\sin 60^\circ$
 - What is the amplitude of the equation $y = 4 \sin(x/2)$?
A. 4 B. $1/2$ C. 8π D. 4π
 - A sound wave is modeled by the curve $y = 3 \sin 4x$. What is the period of this curve?
A. 4 B. $\pi/2$ C. $\pi/4$ D. 3
 - What is the equation of the graph.
A. $y = \sin 3x$
B. $y = 3 \sin x$
C. $y = 3 \cos 3x$
D. $y = 3 \cos x$
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- Which value of x is NOT in the domain of the function defined by $y = \tan x$?
A. 180° B. 60° C. 90° D. 30°
- Convert 125° to radians.
a. $\frac{25\pi}{36}$ radians c. $\frac{36\pi}{25}$ radians
b. $\frac{25\pi}{72}$ radians d. $\frac{72\pi}{25}$ radians

12.

If $\theta = \frac{5\pi}{3}$ radians, at what point does the terminal side of the angle intersect the unit circle?

a. $\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$

c. $\left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$

b. $\left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$

d. $\left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$

13. For an angle with a measure of $-2\pi/3$ radians, which of its trig ratios are positive?

- A. all of them
- B. tangent and cotangent
- C. sine and cosine
- D. secant and cosecant

14. What is $\csc -\pi/6$?

- A. $-1/2$
- B. -2
- C. $1/2$
- D. $\sqrt{3}/2$

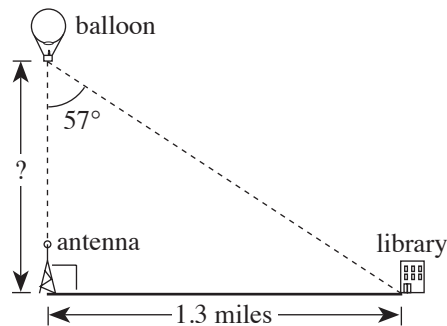
15.

If $\sin \alpha = \frac{12}{13}$, and $\cos \alpha = \frac{5}{13}$, then $\tan \alpha = ?$

- A. $\frac{5}{12}$
- B. $\frac{7}{13}$
- C. $\frac{12}{5}$
- D. $\frac{17}{13}$

16.

From a hot air balloon, the angle between a radio antenna straight below and the base of the library downtown is 57° , as shown below. If the distance between the radio antenna and the library is 1.3 miles, how many miles high is the balloon?



- A. $\frac{1.3}{\sin 57^\circ}$
- B. $\frac{1.3}{\cos 57^\circ}$
- C. $\frac{1.3}{\tan 57^\circ}$
- D. $1.3 \sin 57^\circ$

17. Find the smallest positive angle in standard position that is coterminal with -735° .

a. -375°

b. -15°

c. 345°

d. 15°

18. What is the reference angle for $-\pi/4$?

a. $\pi/4$

b. $\pi/2$

c. $\pi/6$

d. π

19.

If $0^\circ < x^\circ < 90^\circ$ and $\sin x = \frac{1}{2}$, then $\cos x = ?$

A. $\frac{1}{2}$

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

C. 2

D. $\frac{\sqrt{3}}{3}$

20. Find all six trig ratios given the point $(6, -8)$ lies on the terminal side of the angle.

$\sin(x) = \underline{\hspace{2cm}}$

$\cos(x) = \underline{\hspace{2cm}}$

$\tan(x) = \underline{\hspace{2cm}}$

$\sec(x) = \underline{\hspace{2cm}}$

$\csc(x) = \underline{\hspace{2cm}}$

$\cot(x) = \underline{\hspace{2cm}}$