

Determine the sign (positive or negative) of the given value without use of a calculator.

1)  $\sin\left(-\frac{\pi}{7}\right)$

A) Negative

B) Positive

2)  $\tan 260^\circ$

A) Negative

B) Positive

3)  $\cos 190^\circ$

A) Negative

B) Positive

4)  $\sin \frac{8\pi}{5}$

A) Positive

B) Negative

Evaluate without using a calculator by using ratios in a reference triangle.

5)  $\sin 60^\circ$

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

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

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

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

6)  $\cos 210^\circ$

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

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

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

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

7)  $\cot 120^\circ$

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

B) -1

C)  $-\sqrt{3}$

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

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

A)  $\sqrt{3}$

B)  $-\sqrt{3}$

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

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

9)  $\sec \frac{3\pi}{4}$

A) -1

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

C)  $-\sqrt{2}$

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

10)  $\csc \frac{4\pi}{3}$

A)  $-\sqrt{2}$

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

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

D) -1

Point P is on the terminal side of  $\theta$ . Evaluate the six trigonometric functions for  $\theta$ . If the function is undefined, write "undefined."

11) P(3, -2)

Evaluate without using a calculator.

12)  $\sin \theta$ , if  $\cos \theta = \frac{8}{9}$  and  $\tan \theta < 0$

13)  $\csc \theta$ , if  $\cot \theta = -\frac{9}{2}$  and  $\cos \theta < 0$