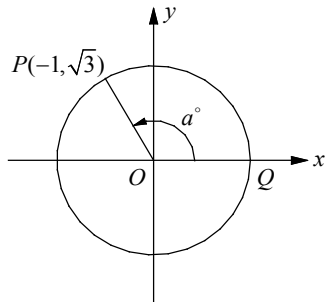## Exercises - The Trigonometric Functions and the Unit Circle

Questions 1 and 2 refer to the following information.

In the xy- plane above, O is the center of the circle, and the measure of $\angle POQ$ is $a°$.
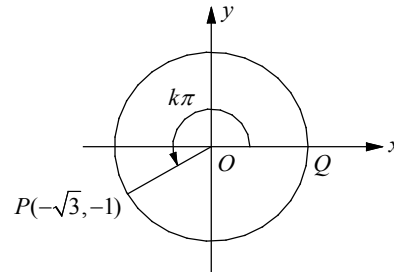
1

What is the cosine of $a°$?

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

B) $\sqrt{3}$

C) $-\dfrac{1}{\sqrt{3}}$

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

2

What is the cosine of $(a+180)°$?

A) $-\sqrt{3}$

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

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

D) $\dfrac{1}{\sqrt{3}}$

Questions 3 and 4 refer to the following information.

In the xy- plane above, O is the center of the circle, and the measure of the angle shown is $k\pi$ radians.

3

What is the value of k ?

A) $\dfrac{5}{6}$

B) $\dfrac{7}{6}$

C) $\dfrac{4}{3}$

D) $\dfrac{5}{3}$

4

What is the value of $\tan(k\pi)$?

A) $-\sqrt{3}$

B) -1

C) $-\dfrac{1}{\sqrt{3}}$

D) $\dfrac{1}{\sqrt{3}}$