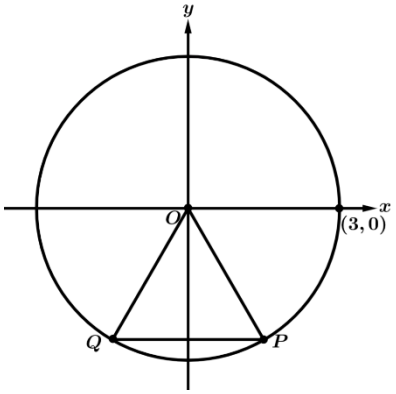


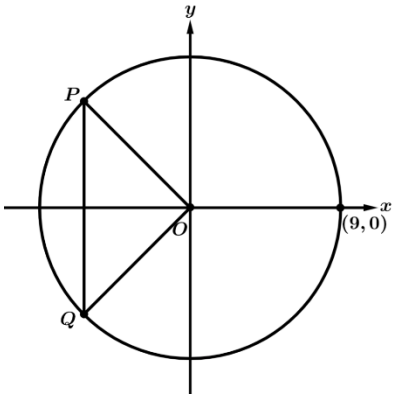

1. The figure above shows a circle of radius 3 along with the equilateral triangle $PQO$. Which of the following gives the coordinates of point $Q$?

(A) $\left(3\cos\frac{7\pi}{6}, 3\sin\frac{7\pi}{6}\right)$

(B) $\left(3\cos\frac{4\pi}{3}, 3\sin\frac{4\pi}{3}\right)$

(C) $\left(3\cos\frac{5\pi}{3}, 3\sin\frac{5\pi}{3}\right)$

(D) $\left(3\cos\frac{11\pi}{6}, 3\sin\frac{11\pi}{6}\right)$



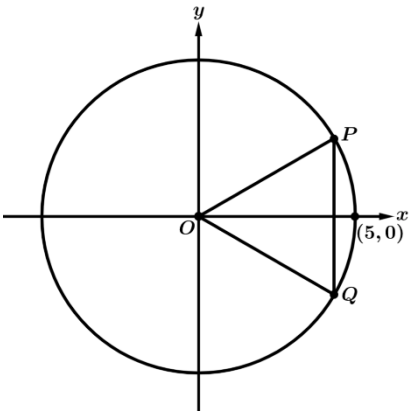

2. The figure above shows a circle of radius 9 along with the isosceles right triangle $PQO$. Which of the following gives the coordinates of point $Q$?

(A) $\left(9\cos\frac{3\pi}{4}, 9\sin\frac{3\pi}{4}\right)$

(B) $\left(9\cos\frac{5\pi}{6}, 9\sin\frac{5\pi}{6}\right)$

(C) $\left(9\cos\frac{7\pi}{6}, 9\sin\frac{7\pi}{6}\right)$

(D) $\left(9\cos\frac{5\pi}{4}, 9\sin\frac{5\pi}{4}\right)$



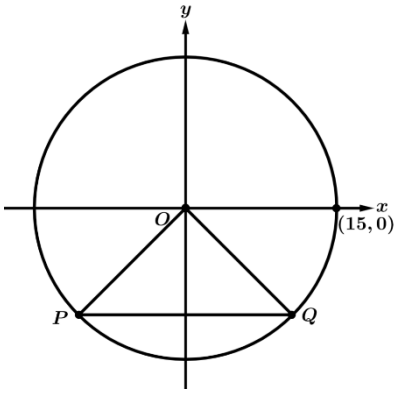

3. The figure above shows a circle of radius 5 along with the equilateral triangle $PQO$. Which of the following gives the coordinates of point $Q$?

(A) $\left(5\cos\frac{\pi}{6}, 5\sin\frac{\pi}{6}\right)$

(B) $\left(5\cos\frac{7\pi}{6}, 5\sin\frac{7\pi}{6}\right)$

(C) $\left(5\cos\frac{11\pi}{6}, 5\sin\frac{11\pi}{6}\right)$

(D) $\left(5\cos\frac{5\pi}{3}, 5\sin\frac{5\pi}{3}\right)$




4. The figure above shows a circle of radius 15 along with the isosceles right triangle $PQO$. Which of the following gives the coordinates of point $Q$?

(A) $\left(15\cos\frac{\pi}{4}, 15\sin\frac{\pi}{4}\right)$

(B) $\left(-15\cos\frac{\pi}{4}, 15\sin\frac{\pi}{4}\right)$

(C) $\left(15\cos\frac{\pi}{4}, -15\sin\frac{\pi}{4}\right)$

(D) $\left(-15\cos\frac{\pi}{4}, -15\sin\frac{\pi}{4}\right)$

**Directions:** Find the exact values of the following expressions.

5. $\sin\frac{3\pi}{2} =$

6. $\cos 2\pi =$

7. $\cos\frac{\pi}{2} =$

8. $\sin\pi =$

9. $\cos 0 =$

10. $\sin\frac{\pi}{2} =$

11. $\sin\frac{-\pi}{2} =$

12. $\cos 3\pi =$

**Directions:** Find the exact values of the following expressions.

13. $\sin\frac{3\pi}{4}$

14. $\cos\frac{\pi}{3}$

15. $\cos\frac{7\pi}{6}$

16. $\sin\frac{2\pi}{3}$

17. $\sin\frac{\pi}{6}$

18. $\cos\frac{5\pi}{4}$

19. $\cos 2\pi$

20. $\sin 2\pi$

21. $\cos\frac{5\pi}{6}$

22. $\cos\frac{11\pi}{6}$

23. $\sin\frac{7\pi}{4}$

24. $\sin\frac{7\pi}{6}$