

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Polar coordinates of a point are given. Find the rectangular coordinates of the point.

1) $(-3, 360^\circ)$ A) $(-3, 0)$ B) $(0, -3)$ C) $(0, 3)$ D) $(3, 0)$ 1) _____

2) $(-1, -360^\circ)$ A) $(-1, 0)$ B) $(1, 0)$ C) $(0, 1)$ D) $(0, -1)$ 2) _____

3) $(3, 120^\circ)$ A) $\left(\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ B) $\left(\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ C) $\left(-\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ D) $\left(-\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ 3) _____

4) $(-5, -180^\circ)$ A) $(0, 5)$ B) $(5, 0)$ C) $(-5, 0)$ D) $(0, -5)$ 4) _____

5) $(3, -135^\circ)$ A) $\left(\frac{-3\sqrt{2}}{2}, \frac{-3\sqrt{2}}{2}\right)$ B) $\left(\frac{3\sqrt{2}}{2}, \frac{3\sqrt{2}}{2}\right)$ C) $\left(\frac{-3\sqrt{2}}{2}, \frac{3\sqrt{2}}{2}\right)$ D) $\left(\frac{3\sqrt{2}}{2}, \frac{-3\sqrt{2}}{2}\right)$ 5) _____

6) $(-3, 120^\circ)$ A) $\left(\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ B) $\left(\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ C) $\left(-\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ D) $\left(-\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ 6) _____

7) $\left(-3, \frac{2\pi}{3}\right)$ A) $\left(-\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ B) $\left(-\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ C) $\left(\frac{3}{2}, \frac{3\sqrt{3}}{2}\right)$ D) $\left(\frac{3}{2}, \frac{-3\sqrt{3}}{2}\right)$ 7) _____

8) $\left(9, \frac{2\pi}{3}\right)$ A) $\left(\frac{9}{2}, \frac{9\sqrt{3}}{2}\right)$ B) $\left(-\frac{9}{2}, \frac{-9\sqrt{3}}{2}\right)$ C) $\left(\frac{9}{2}, \frac{-9\sqrt{3}}{2}\right)$ D) $\left(-\frac{9}{2}, \frac{9\sqrt{3}}{2}\right)$ 8) _____

9) $\left(-5, \frac{3\pi}{4}\right)$ A) $\left(\frac{5\sqrt{2}}{2}, \frac{-5\sqrt{2}}{2}\right)$ B) $\left(\frac{5\sqrt{2}}{2}, \frac{5\sqrt{2}}{2}\right)$ C) $\left(\frac{-5\sqrt{2}}{2}, \frac{5\sqrt{2}}{2}\right)$ D) $\left(\frac{-5\sqrt{2}}{2}, \frac{-5\sqrt{2}}{2}\right)$ 9) _____

10) $\left(-3, \frac{3\pi}{4}\right)$ A) $\left(\frac{-3\sqrt{2}}{2}, \frac{-3\sqrt{2}}{2}\right)$ B) $\left(\frac{3\sqrt{2}}{2}, \frac{3\sqrt{2}}{2}\right)$ C) $\left(\frac{-3\sqrt{2}}{2}, \frac{3\sqrt{2}}{2}\right)$ D) $\left(\frac{3\sqrt{2}}{2}, \frac{-3\sqrt{2}}{2}\right)$ 10) _____

The rectangular coordinates of a point are given. Find polar coordinates of the point. Express θ in radians.

11) $(-4, 4)$ 11) _____
A) $\left(4, \frac{\pi}{4}\right)$ B) $\left(4\sqrt{2}, \frac{3\pi}{4}\right)$ C) $\left(4\sqrt{2}, -\frac{3\pi}{4}\right)$ D) $\left(4, -\frac{3\pi}{4}\right)$

12) $(3\sqrt{3}, 3)$ 12) _____
A) $\left(3, \frac{\pi}{3}\right)$ B) $\left(6, \frac{\pi}{3}\right)$ C) $\left(6, \frac{\pi}{6}\right)$ D) $\left(3, \frac{\pi}{6}\right)$

13) $(4, -4\sqrt{3})$ 13) _____
A) $\left(8, \frac{5\pi}{3}\right)$ B) $\left(4, \frac{11\pi}{6}\right)$ C) $\left(4, \frac{5\pi}{3}\right)$ D) $\left(8, \frac{11\pi}{6}\right)$

14) $(5, -5)$ 14) _____
A) $\left(5\sqrt{2}, -\frac{7\pi}{4}\right)$ B) $\left(5, -\frac{7\pi}{4}\right)$ C) $\left(5\sqrt{2}, \frac{7\pi}{4}\right)$ D) $\left(5, \frac{\pi}{4}\right)$

15) $(2\sqrt{3}, 2)$ 15) _____
A) $\left(4, \frac{\pi}{6}\right)$ B) $\left(2, \frac{\pi}{3}\right)$ C) $\left(4, \frac{\pi}{3}\right)$ D) $\left(2, \frac{\pi}{6}\right)$

16) $(5, -5)$ 16) _____
A) $(5\sqrt{2}, 135^\circ)$ B) $(-5\sqrt{2}, 45^\circ)$ C) $(-5\sqrt{2}, 135^\circ)$ D) $(-5\sqrt{2}, 225^\circ)$

17) $(-5, 0)$ 17) _____
A) $(5, 0)$ B) $(5, \pi)$ C) $\left(5, \frac{\pi}{2}\right)$ D) $\left(5, \frac{3\pi}{2}\right)$

18) $(-4\sqrt{2}, -4\sqrt{2})$ 18) _____
A) $(4\sqrt{2}, 225^\circ)$ B) $(4\sqrt{2}, 135^\circ)$ C) $(8, 225^\circ)$ D) $(8, 135^\circ)$

19) $(0, -\sqrt{5})$ 19) _____
A) $(-\sqrt{5}, 180^\circ)$ B) $(\sqrt{5}, 90^\circ)$ C) $(-\sqrt{5}, 90^\circ)$ D) $(-\sqrt{5}, 270^\circ)$

20) $(6, -6\sqrt{3})$ 20) _____
A) $\left(12, \frac{5\pi}{3}\right)$ B) $\left(6, \frac{11\pi}{6}\right)$ C) $\left(6, \frac{5\pi}{3}\right)$ D) $\left(12, \frac{11\pi}{6}\right)$

Answer Key

Testname: POLARWS2

- 1) A
- 2) A
- 3) D
- 4) B
- 5) A
- 6) A
- 7) D
- 8) D
- 9) A
- 10) D
- 11) B
- 12) C
- 13) A
- 14) C
- 15) A
- 16) C
- 17) B
- 18) C
- 19) C
- 20) A