

# Classroom Voting Questions: Precalculus

## Angles

1. The angles  $-12^\circ$  and  $102^\circ$  are
  - (a) complementary
  - (b) supplementary
  - (c) neither
  
2. The angles  $24^\circ$ ,  $36^\circ$ , and  $30^\circ$  are
  - (a) complementary
  - (b) supplementary
  - (c) neither
  
3. The angles  $30^\circ$  and  $150^\circ$  are
  - (a) complementary
  - (b) supplementary
  - (c) neither
  
4. The angles  $2^\circ$  and  $88^\circ$  are
  - (a) complementary
  - (b) supplementary
  - (c) neither
  
5. In what quadrant is the terminal side of  $215^\circ$ ?
  - (a) I
  - (b) II
  - (c) III
  - (d) IV

6. In what quadrant is the terminal side of  $-300^\circ$ ?
- (a) I
  - (b) II
  - (c) III
  - (d) IV
7. Which of the following angles is coterminal with a standard position angle of  $215^\circ$ ?
- (a)  $45^\circ$
  - (b)  $145^\circ$
  - (c)  $-145^\circ$
  - (d)  $-215^\circ$
8. Find the smallest positive angle coterminal with  $-980^\circ$ .
- (a)  $260^\circ$
  - (b)  $100^\circ$
  - (c)  $60^\circ$
  - (d)  $20^\circ$
9. What is the radian measure of a  $216^\circ$  angle?
- (a)  $108\pi$
  - (b)  $\frac{5\pi}{6}$
  - (c)  $\frac{6\pi}{5}$
  - (d)  $\frac{8\pi}{9}$
10. What is the degree measure of a  $\frac{5\pi}{3}$  angle?
- (a)  $150^\circ$
  - (b)  $300^\circ$
  - (c)  $250^\circ$
  - (d)  $330^\circ$

11. In what quadrant is the terminal side of a standard position angle with radian measure  $\frac{8\pi}{3}$  radians?
- (a) I
  - (b) II
  - (c) III
  - (d) IV
12. Which of the following angles is complementary to an angle of  $\frac{\pi}{3}$  radians?
- (a)  $\frac{\pi}{6}$
  - (b)  $\frac{\pi}{4}$
  - (c)  $\frac{\pi}{3}$
  - (d)  $\frac{\pi}{2}$
13. You walk 200 meters around a circular track with a radius of 100 meters. Give an angle in radians that represents your final position relative to your starting position.
- (a) 2 radians
  - (b) 100 radians
  - (c)  $\frac{1}{2}$  radian
  - (d)  $2\pi$  radians
14. Find the length of the arc spanned by an angle of 3 radians on a circle of radius 2 feet.
- (a) 2 radians
  - (b) 3 radians
  - (c) 6 radians
  - (d) 1.5 radians
15. Consider a circle of radius  $r$  having a central angle  $\theta$  (measured in radians). If  $s$  is the length of the arc of the circle corresponding to  $\theta$ , then  $s = r\theta$ .
- (a) True, and I am very confident.

- (b) True, but I am not very confident.
- (c) False, but I am not very confident.
- (d) False, and am very confident.

16. If the legs of a right triangle are 8 and 15, how long is the hypotenuse?

- (a)  $\sqrt{23}$
- (b) 17
- (c) 23
- (d) 289