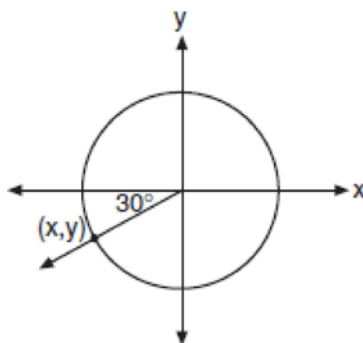


A2.A.56: Determining Trigonometric Functions 4: Know the exact and approximate values of the sine, cosine, and tangent of 0° , 30° , 45° , 60° , 90° , 180° , and 270° angles

- 1 In the unit circle shown in the accompanying diagram, what are the coordinates of (x,y) ?



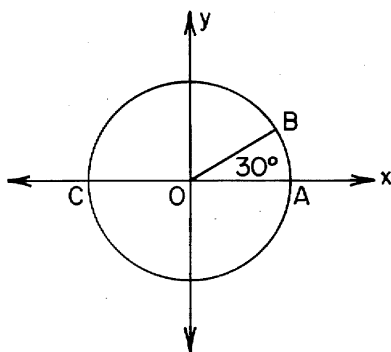
1) $\left(-\frac{\sqrt{3}}{2}, -0.5\right)$

3) $(-30, -210)$

2) $\left(-0.5, -\frac{\sqrt{3}}{2}\right)$

4) $\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$

- 2 In the accompanying diagram of circle O , \overline{COA} is a diameter, O is the origin, $\overline{OA} = 1$, and $m\angle BOA = 30^\circ$. What are the coordinates of B ?



1) $\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$

3) $\left(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$

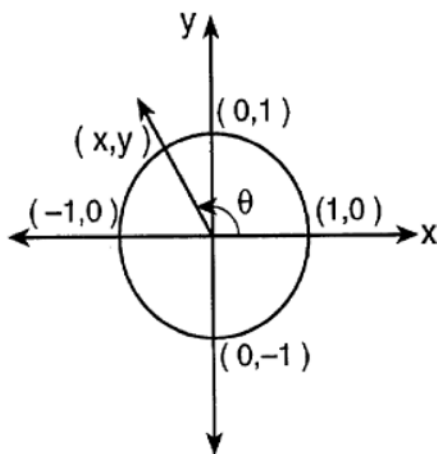
2) $\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$

4) $\left(\frac{\sqrt{2}}{2}, \frac{1}{2}\right)$

A2.A.56: Determining Trigonometric Functions 4

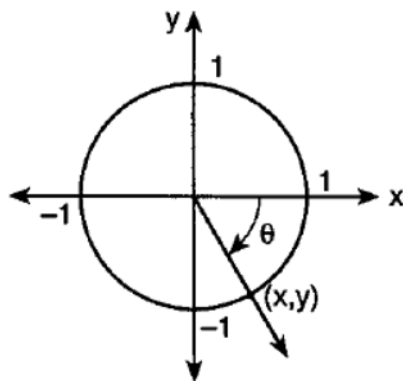
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- 3 In the accompanying diagram of a unit circle, the ordered pair (x,y) represents the point where the terminal side of θ intersects the unit circle.



If $m\angle\theta = 120$, what is the value of x in simplest form?

- | | |
|--------------------------|-------------------|
| 1) $\frac{\sqrt{3}}{2}$ | 3) $-\frac{1}{2}$ |
| 2) $-\frac{\sqrt{3}}{2}$ | 4) $\frac{1}{2}$ |
- 4 In the accompanying diagram of a unit circle, the ordered pair (x,y) represents the point where the terminal side of θ intersects the unit circle.



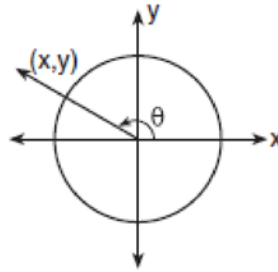
If $\theta = -\frac{\pi}{3}$, what is the value of y ?

- | | |
|--------------------------|-------------------|
| 1) $-\frac{\sqrt{3}}{2}$ | 3) $-\sqrt{3}$ |
| 2) $-\frac{\sqrt{2}}{2}$ | 4) $-\frac{1}{2}$ |

A2.A.56: Determining Trigonometric Functions 4

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- 5 In the accompanying diagram of a unit circle, the ordered pair (x,y) represents the point where the terminal side of θ intersects the unit circle.



If $\theta = 150^\circ$, what is the value of x ?

1) 1

3) $-\frac{1}{2}$

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

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

A2.A.56: Determining Trigonometric Functions 4: Know the exact and approximate values of the sine, cosine, and tangent of 0° , 30° , 45° , 60° , 90° , 180° , and 270° angles**Answer Section**

- | | | |
|---|--------|-----------------|
| 1 | ANS: 1 | REF: 010718b |
| 2 | ANS: 2 | REF: 068926siii |
| 3 | ANS: 3 | REF: 069728siii |
| 4 | ANS: 1 | REF: 019828siii |
| 5 | ANS: 2 | REF: 010226siii |