Lesson 4.2: Primary Trigonometric Ratios

▤ Explore Your Understanding Assignment

This assignment includes multiple choice and short answer questions. For multiple choice questions, select the best answer. Each is worth 1 mark. Marks assigned to short answer questions are indicated for each question. Be sure to show all necessary work.

(1) _____   1.   The exact value of sin θ, if the terminal arm of the angle in standard position passes through the point (–3, 4), is:

   A. $-\dfrac{4}{3}$

   B. $-\dfrac{3}{5}$

   C. $\dfrac{4}{5}$

   D. $\dfrac{5}{4}$

(1) _____   2.   The exact value of cos 240° is equivalent to

   A. $-\cos 60°$

   B. $\cos 60°$

   C. $-\cos 30°$

   D. $\cos 30°$

(2)   3.   Label the sign of each ratio below as positive (P) or negative (N).

   _____   A.   sin67°

   _____   B.   cos345°

   _____   C.   tan106°

   _____   D.   cos235°

① _____   4.   The solution(s) to $\tan\theta = -\sqrt{3}$ for $0° \le \theta < 180°$ is (are)

        A. $\theta = 60°$ only
        B. $\theta = 120°$ only
        C. $\theta = 300°$ only
        D. $\theta = 120°$ and $\theta = 300°$

5.   The point (–9, 40) is on the terminal arm of an angle, θ, in standard position.

①   a.   Sketch the angle in standard position.

①   b.   What is the length of the line segment connecting the origin to the point (–9, 40)?

②   c.   Determine the measure of θ, to the nearest tenth of a degree.

6. The use of a ladder is considered safe if the angle between the ground and the ladder is less than 75°. Charlie's 5 ft long ladder is 1 ft from the base of a wall.

①   a. Is the ladder being used safely?

①   b. How far away from the wall is the minimum distance Charlie's other ladder should be if it is 10 ft long?

②   7.   Determine the value of θ, an angle in standard position, where $\sin\theta = -\frac{1}{2}$ and $\tan\theta = \frac{\sqrt{3}}{3}$, $0° \leq \theta < 360°$.

/13

You have completed *Lesson 4.2 Explore Your Understanding Assignment.* Please review all work in *Workbook 4A* to ensure it is your best work. Submit *Workbook 4A* for marking at this time and proceed to *Lesson 4.3* in the *Module*.