

**A2.A.56: Determining Trigonometric Functions 1: Know the exact and approximate values of the sine, cosine, and tangent of  $0^\circ$ ,  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$ ,  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$  angles**

- 1 Which is equal in value to  $\sin 180^\circ$ ?
  - 1)  $\tan 45^\circ$
  - 2)  $\cos 90^\circ$
  - 3)  $\cos 0^\circ$
  - 4)  $\tan 90^\circ$
- 2 The value of  $(\sin 60^\circ)(\cos 60^\circ)$  is
  - 1)  $\frac{3}{4}$
  - 2)  $\frac{\sqrt{2}}{4}$
  - 3)  $\frac{\sqrt{3}}{3}$
  - 4)  $\frac{\sqrt{3}}{4}$
- 3 Express the product of  $\cos 30^\circ$  and  $\sin 45^\circ$  in simplest radical form.
- 4 In the interval  $0^\circ \leq x < 360^\circ$ ,  $\tan x$  is undefined when  $x$  equals
  - 1)  $0^\circ$  and  $90^\circ$
  - 2)  $90^\circ$  and  $180^\circ$
  - 3)  $180^\circ$  and  $270^\circ$
  - 4)  $90^\circ$  and  $270^\circ$
- 5 Which is the value of  $\cos(-240^\circ)$ ?
  - 1)  $-\frac{1}{2}$
  - 2)  $\frac{3}{2}$
  - 3)  $\frac{1}{2}$
  - 4)  $-\frac{3}{2}$
- 6 What is the value of  $\sin(-240^\circ)$ ?
  - 1)  $\frac{1}{2}$
  - 2)  $-\frac{1}{2}$
  - 3)  $\frac{\sqrt{3}}{2}$
  - 4)  $-\frac{\sqrt{3}}{2}$
- 7 What is the value of  $\cos(-120^\circ)$ ?
  - 1)  $\frac{1}{2}$
  - 2)  $-\frac{1}{2}$
  - 3)  $\frac{\sqrt{3}}{2}$
  - 4)  $-\frac{\sqrt{3}}{2}$
- 8 Find the value of  $\sin 135^\circ$  in radical form.
- 9 Find the value of  $\tan 120^\circ$ .
- 10 Find the value of  $\tan(-135^\circ)$ .

**A2.A.56: Determining Trigonometric Functions 1: 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: 2 REF: 069021siii

2 ANS: 4 REF: 089017siii

3 ANS:

$$\frac{\sqrt{3}}{2} \times \frac{\sqrt{2}}{2} = \frac{\sqrt{6}}{4}$$

REF: 061331a2

4 ANS: 4 REF: 011312a2

5 ANS: 1 REF: 088527siii

6 ANS: 3 REF: 019027siii

7 ANS: 2 REF: 069434siii

8 ANS:

$$\frac{1}{\sqrt{2}}$$

REF: 089806siii

9 ANS:

$$-\sqrt{3}$$

REF: 018517siii

10 ANS:

$$1$$

REF: 068709siii