Section 1: Trigonometric functions and identities

Section test

Do not use a calculator for this test.

1. Find the exact values of

$\cos 120°$	$\sin 120°$	$\tan 120°$
$\sin 330°$	$\cos 330°$	$\tan 330°$

2. What is the exact value of $\sin^2 30° - \cos^2 30°$?

(a) $\frac{1}{2}$ (b) 1

(c) -1 (d) $-\frac{1}{2}$

3. Which one of the following statements is true?

(a) $\sin 305° = -\sin 45°$ (b) $\sin 305° = \sin 55°$

(c) $\sin 305° = -\sin 55°$ (d) $\sin 305° = \sin 45°$

4. Which one of the following statements is true?

(a) $\tan 195° = \tan 15°$ (b) $\tan 195° = -\tan 15°$

(c) $\tan 195° = \tan 75°$ (d) $\tan 195° = -\tan 75°$

5. What are the angles θ in the range $-180° \leq \theta \leq 180°$ for which $\cos\theta = \cos 295°$?

6. What are the angles θ in the range $0° \leq \theta \leq 720°$ for which $\tan\theta = \tan 32°$?

7. For which of these values of x is $\sin x = \frac{\sqrt{3}}{2}$? Choose as many as apply.

(a) 510° (b) 840°

(c) 870° (d) 660°

8. For which of these values of x is $\cos x = \frac{\sqrt{3}}{2}$? Choose as many as apply.

(a) 1050° (b) 1020°

(c) 780° (d) 1080°

9. Which of the following statements are true? Choose as many as apply.

(i) If $\cos x = a$ then $\cos(-x) = a$

(ii) If $\sin x = a$ then $\sin(180° - x) = a$

(iii) If $\tan x = a$ then $\tan(-x) = a$

10. Which of the following statements are true? Choose as many as apply.

(i) If $\cos x = a$ then $\cos(-x) = -a$

(ii) If $\sin x = a$ then $\sin(-x) = -a$

(iii) If $\tan x = a$ then $\tan(-x) = -a$