

Name: _____

Period: _____

Row: ___ Seat: ___

MPS22 EXAM 3 PRACTICE TEST

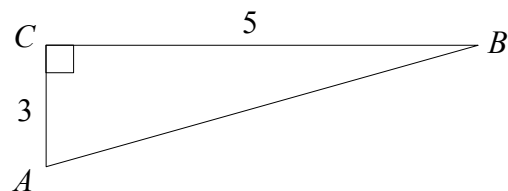
SHOW ALL WORK. Give exact answers unless indicated otherwise. Place a box around your final answers. Point values are given in brackets.

1. (a) Convert to degrees: [8]

$$\frac{15\pi}{9}$$

(b) Convert to radians and express in simplest form: 860°

2. Find the exact values of $\sin A$, $\cos A$, and $\tan A$ given $\triangle ABC$ shown below. [8]



3. Sketch the given angle in standard position and state one positive and one negative coterminal angle. [8]
 -405°

4. Find the six trigonometric functions of the angle θ (in standard position) whose terminal side passes through the point $(-4, -6)$. [12]

5. Given the equation [10]

$$y = -4\sin(5x - 7) + 11$$

State the following:

Amplitude: _____

Frequency: _____

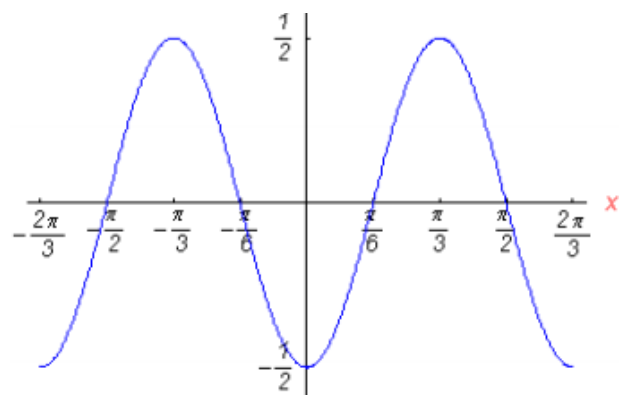
Period: _____

Vertical Shift: _____

Phase Shift: _____

6. Write the equation of the curve below in: [8]

the form $y = a\sin(bx) + c$



7. State the reference angle for each angle: [6]
(a) $1,300^\circ$

(b) $-\frac{12\pi}{5}$

8. Write the equation of a cosine curve with [8]
period 6π , amplitude 4, and with a maximum value of 10.

9. Find the exact value of each trigonometric function in simplest radical form: [18]

(a) $\cos 30^\circ$

(a) $\sin 540^\circ$

(c) $\tan \frac{3\pi}{4}$

(d) $\cot\left(\frac{-11\pi}{3}\right)$

(e) $\sec \frac{5\pi}{3}$

(f) $\csc \frac{15\pi}{2}$

10. Given the equation $y = 2 \cos\left(2x - \frac{\pi}{2}\right) + 1$.

[14]

(a) State the amplitude: _____

(b) State the period: _____

(c) State the phase shift: _____

(d) Sketch at least two complete cycles of the graph $y = 2 \cos\left(2x - \frac{\pi}{2}\right) + 1$.

