

# Quiz Unit 3.1-3.5

Name: \_\_\_\_\_

Keep in exact value unless otherwise stated.

1. Convert the following angles to either radian measure or degrees.

a)  $300^\circ =$  \_\_\_\_\_

b)  $\frac{3\pi}{4} \text{ rad} =$  \_\_\_\_\_

2. A circle of radius 25 cm has a central angle of  $85^\circ$ . Determine the length of the arc that subtends this angle.

3. An engine on a jet aircraft turns at about 12 000 rpm. Find an exact value for the angular velocity of the engine in radians per second.

4. Determine the exact values for each expression. Use related angle formulas. Show work.

a)  $\cos \frac{2\pi}{3}$

b)  $\csc \frac{5\pi}{4}$

5. Given that  $0 \leq \theta \leq 2\pi$ , find  $\theta$  given the following (show work)

a)  $\tan \theta = \sqrt{3}$

b)  $\sec \theta = \frac{2}{\sqrt{3}}$

6. Sketch the graph of  $y = -3\cos(2x - \frac{\pi}{2})$  for one cycle. State all pertinent information.

