

Precalculus Exam II

Wed October 12th

Instructor: Vignon S. Oussa

Name _____

Instructions: please, show all your work very clearly and precisely. Any unsupported work will receive no credits. No calculator allowed.

1. **5 pts** Find the equation of the line passing through the point $(2, 3)$ and perpendicular to the line whose equation is $y = 2x - 1$ in slope-intercept form

2. **5 pts** Solve this equation by completing the square $x^2 + x - 2 = 0$.

3. **5 pts** Solve this equation by using the quadratic formula $2x^2 + 3x = 2$.

4. **6 pts** Answer the followings.

1 degree = A seconds.

1 second = B minutes.

1 minute = C radians.

Find A, B and C .

5. **5 pts** Convert the angle 10.60° to degree-minute-second form.

6. **20 pts** Without a calculator, find the followings.

(a) $\cos\left(-\frac{\pi}{2}\right)$

(b) $\tan\left(\frac{11\pi}{4}\right)$

(c) $\sin\left(\frac{5\pi}{3}\right)$

(d) $\cot\left(\frac{\pi}{6}\right)$