Student: _____ **Date:** _____ **Time:** _____	**Instructor:** Fred Khoury **Course:** Math 2312-1000 Precalculus (Fall - 2015) **Book:** Lial: College Algebra and Trigonometry, 4e	**Assignment:** Quiz Sec 3.6

1. Give the rectangular coordinates for the point.

$(4,270°)$

A. $(-4,0)$

B. $(0,4)$

C. $(4,0)$

D. $(0,-4)$

2. Give the rectangular coordinates for the point.

$(-10,225°)$

A. $(-5\sqrt{2},-5)$

B. $(-5,-5\sqrt{2})$

C. $(5\sqrt{2},5)$

D. $(5\sqrt{2},5\sqrt{2})$

3. The rectangular coordinates of a point are given. Express the point in polar coordinates with $r \geq 0$ and $0° \leq \theta < 360°$.

$(3,3)$

A. $(3\sqrt{2},45°)$

B. $(3\sqrt{2},135°)$

C. $(3,90°)$

D. $(3,45°)$

4. The rectangular coordinates of a point are given. Express the point in polar coordinates with $r \geq 0$ and $0° \leq \theta < 360°$.

$(-\sqrt{2},-\sqrt{2})$

A. $(\sqrt{2},135°)$

B. $(4,225°)$

C. $(2,225°)$

D. $(2,315°)$

5. For the given rectangular equation, give its equivalent polar equation.

$x - y = 20$

A. $r = \dfrac{1}{20\cos\theta - 20\sin\theta}$

B. $r = \dfrac{20}{\sin\theta - \cos\theta}$

C. $r = \dfrac{20}{\cos\theta + \sin\theta}$

D. $r = \dfrac{20}{\cos\theta - \sin\theta}$

6. For the given rectangular equation, give its equivalent polar equation.

$10x - y = 2$

A. $r = \dfrac{10}{2\cos\theta - \sin\theta}$

B. $r = \dfrac{2}{10\sin\theta - \cos\theta}$

C. $r = \dfrac{2}{10\cos\theta - \sin\theta}$

D. $r = \dfrac{2}{10\cos\theta + \sin\theta}$

7. For the given rectangular equation, give its equivalent polar equation.

$2x + 3y = 6$

A. $r = \dfrac{6}{2\cos\theta + 3\sin\theta}$

B. $r = \dfrac{6}{2\sin\theta + 3\cos\theta}$

C. $r = \dfrac{2\cos\theta + 3\sin\theta}{6}$

D. $r = \dfrac{2\sin\theta + 3\cos\theta}{6}$

8. For the given rectangular equation, give its equivalent polar equation.

$x^2 + y^2 = 49$

A. $r = 49$

B. $r = 7\cos\theta$

C. $r = 7$

D. $r = 7\sin\theta$

9. Find an equivalent equation in rectangular coordinates.

$r = 10 \sin \theta$

A. $\sqrt{x^2 + y^2} = 10x$

B. $x^2 + y^2 = 10y$

C. $\sqrt{x^2 + y^2} = 10y$

D. $x^2 + y^2 = 10x$

10. Find an equivalent equation in rectangular coordinates.

$r = 1 + 2 \sin \theta$

A. $\sqrt{x^2 + y^2} = x^2 + y^2 + 2x$

B. $x^2 + y^2 = \sqrt{x^2 + y^2} + 2y$

C. $\sqrt{x^2 + y^2} = x^2 + y^2 + 2y$

D. $x^2 + y^2 = \sqrt{x^2 + y^2} + 2x$

11. Find an equivalent equation in rectangular coordinates.

$$r = \frac{5}{1 + \cos \theta}$$

A. $x^2 = 25 - 10y$

B. $y^2 = 10x - 25$

C. $5 = x + \sqrt{x^2 + y^2}$

D. $x^2 = 10y - 25$

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12. Find an equivalent equation in rectangular coordinates.

$r = \cos\theta$

A. $(x + y)^2 = x$

B. $(x + y)^2 = y$

C. $x^2 + y^2 = x$

D. $x^2 + y^2 = y$