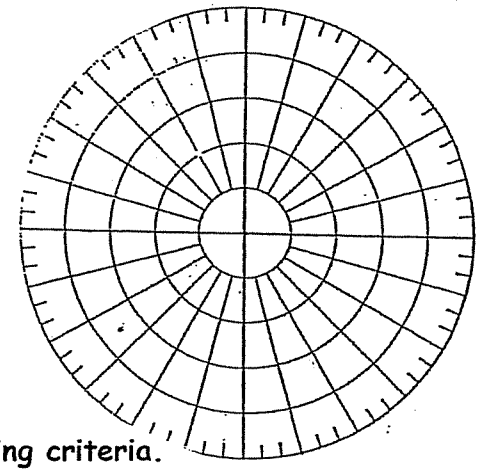
Accel Math III Practice Worksheet #2: Polar Coordinates Name _____

Unit #7: Extended Trigonometry

MA3M6



I. Graph each point and label.

A $(3, \frac{\pi}{6})$ B $(-2, \frac{-\pi}{3})$ C $(-3, 180°)$

D $(1, 135°)$ E $(-1, 45°)$ F $(2, \frac{4\pi}{3})$

II. Name the above points using coordinates fitting the following criteria.

	$r > 0$ and $0° < \theta < 360°$	$r < 0$ and $0° < \theta < 360°$	$r > 0$ and $-360° < \theta < 0°$	$r < 0$ and $-360 < \theta < 0°$
A				
B				
C				
D				
E				

III. Convert each polar coordinate to rectangular coordinates.

1. $(3, 150°)$ 2. $\left(2, \frac{\pi}{6}\right)$ 3. $(0, 27°)$

4. $\left(4, \frac{5\pi}{3}\right)$ 5. $\left(6, \frac{-\pi}{4}\right)$ 6. $\left(-7, \frac{7\pi}{4}\right)$

7. $(1, 210°)$ 8. $(-5, 95°)$ 9. $(10, 240°)$

IV. Convert each rectangular coordinate to polar coordinates. Give exact answers for *r*.

1. $(\sqrt{3}, 1)$ 2. $(\sqrt{3}, -\sqrt{3})$ 3. $(-5, 5)$ 4. $(5, -5)$

5. $(0, -8)$ 6. $(2, -\sqrt{2})$ 7. $(3, 4)$ 8. $(5, -12)$

9. $(-3, -12)$