

# Fill in the Blanks

# Polar to Cartesian Conversions

Cartesian Coordinate	Polar Coordinate	Cartesian Equation	Polar Equation
(12, 5)		$x^2 + y^2 = 16$	
(1, $\sqrt{3}$ )			$r = 2$
	$(2\sqrt{2}, \frac{\pi}{4})$	$y = 4x$	
(-1, $\sqrt{3}$ )		$x^2 + y^2 - 2y = 0$	
	$(2, \frac{\pi}{2})$		$r = 5 \sec \theta$
	$(10, \frac{4\pi}{3})$		$r = 2 \cos \theta$
$(1, -\frac{1}{2})$		$y = 8x^2$	
	$(5, -\frac{\pi}{6})$		$r = 5 \cot \theta \operatorname{cosec} \theta$
(-8, -6)		$y^2 - x^2 = 4$	
(5, $-5\sqrt{3}$ )		$xy = 9$	
	$(6, \frac{11\pi}{6})$		$r = \cos \theta + 2 \sin \theta$