Trig

Review 9.1-9.4

Quiz 9.3-9.4 today

MCT ~~tomorrow~~ 9.1-9.4

Tue.

Lesson 9-3 *(Pages 568–573)*

$2^2 + \sqrt{2}^2 = r^2$

$4 + 2 = r^2$

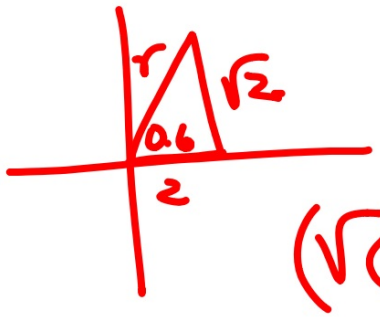
Find the polar coordinates of each point with the given rectangular coordinates. Use $0 \leq \theta < 2\pi$ and $r \geq 0$.

1. $(1, -1)$

2. $(3, 0)$

3. $(2, \sqrt{2})$

$\tan^{-1}\left(\frac{\sqrt{2}}{2}\right)$



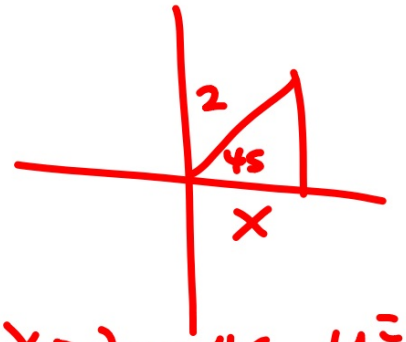
$(\sqrt{6}, 0.6)$

Find the rectangular coordinates of each point with the given polar coordinates.

4. $\left(2, \frac{\pi}{4}\right)$ $(\sqrt{2}, \sqrt{2})$

5. $\left(\frac{1}{4}, \frac{\pi}{2}\right)$

6. $(5, 240°)$



$x = 2\cos 45 \quad y = 2\sin 45$

$= 2 \cdot \frac{\sqrt{2}}{2}$

Write each rectangular equation in polar form.

7. $x = -2$

8. $y = 6$

$x =$

$r\cos\theta = -2$

$r = \frac{-2}{\cos\theta} = -2\sec\theta$

$r\sin\theta = -2$

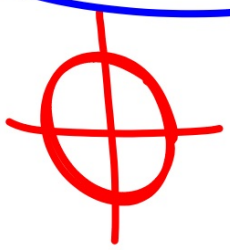
$r = -\frac{2}{\sin\theta}$

$r = -2\csc\theta$

9. $x^2 + y^2 = 36$

$\sqrt{r^2} = \sqrt{36}$

$r = \pm 6$



10. $x^2 + y^2 = 3y$

$r^2 = 3r\sin\theta$

$r^2 - 3r\sin\theta = 0$

$r - 3\sin\theta = 0$

$r = 3\sin\theta$

Write each polar equation in rectangular form.

11. $r = 4$

$r^2 = 4^2$

$\sqrt{x^2+y^2} = 16$

x^2

12. $r = 4\cos\theta$

$r^2 = 4r\cos\theta$

$x^2+y^2 = 4x$

$x^2+y^2-4x = 0$

$36+25=\sqrt{61}$

$p = r\cos(\theta - \phi)$

$\frac{6\sqrt{61}}{61} r\cos(\theta - 140°)$

$0,8$

Lesson 9-4 *(Pages [illegible])*

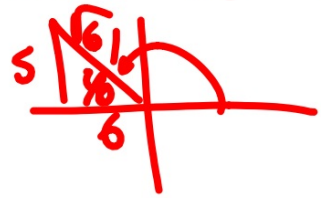
Write each equation in polar form. Round ϕ to the nearest degree.

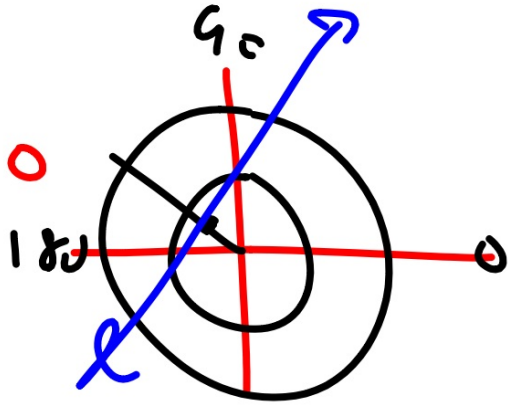
1. $6x - 5y + 6 = 0$

2. $3x + 9y = 90$

$-\sqrt{61}\ \sqrt{61}\ \sqrt{61}\ -\sqrt{61}$

$-\frac{6}{\sqrt{61}} x + \frac{5}{\sqrt{61}} y \left(-\frac{6}{\sqrt{61}}\right) = 0$





$\cos(A-B)$

Write each equation in rectangular form.

3. $8 = r\cos(\theta - 30°)$

4. $1 = r\cos(\theta + \pi)$

$8 = r(\cos\theta\cos 30 + \sin\theta\sin 30)$

$8 = r\left(\frac{\sqrt{3}}{2}\cos\theta + \frac{1}{2}\sin\theta\right)$

$8 = \frac{\sqrt{3}}{2}x + \frac{1}{2}y$

$16 = \sqrt{3}x + y$

$\sqrt{3}x + y - 16 = 0$

5. Graph the polar equation $3 = r\cos(\theta - 30^\circ)$.

Lesson 9-1 *(Pages 553–560)*

Graph each point.

1. $K(4, 45°)$

2. $M\left(2, \frac{\pi}{6}\right)$

Graph each polar equation.

5. $r = 2$

6. $\theta = 60^\circ$

9. Write a polar equation for the circle centered at the origin with radius $\sqrt{5}$.

Lesson 9-2 *(Pages 561–567)*

Graph each polar equation. Identify the type of curve

1. $r = -2 \sin \theta$

2. $r = 4\theta$