Trig

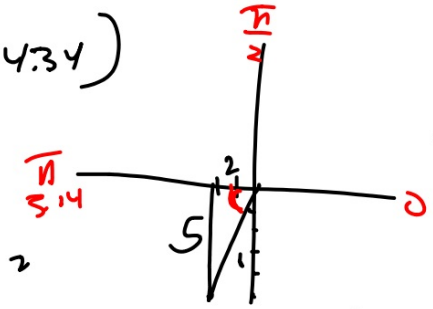
Review 9.1-9.4

Quiz 9.3-9.4 today

MCT tomorrow
9.1-9.5

Whiteboards

p. 571 $(\sqrt{29}, 4.34)$



$\tan^{-1}\left(\frac{5}{2}\right) = 1.2$

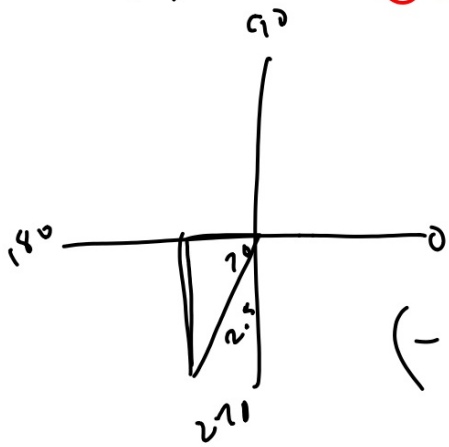
$\theta = 4.34$

6. $(-2, -5)$

$4 + 25 = r^2$

$\sqrt{29}$

8. $(2.5, 250°)$

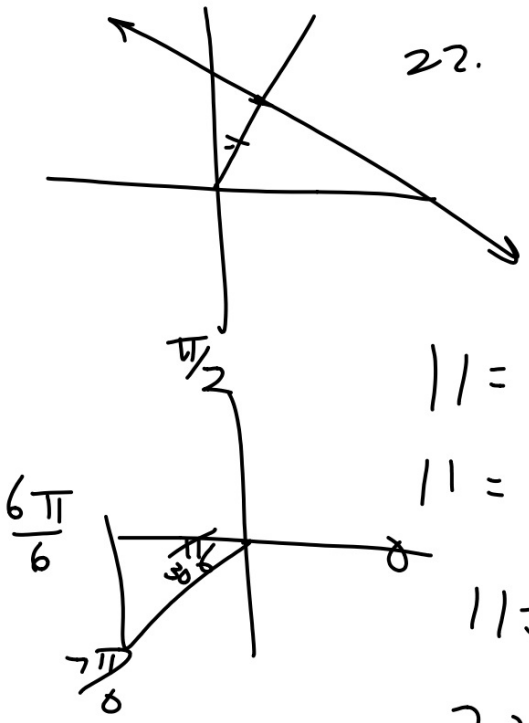


$x = 2.5\cos 70° \approx 0.9$

$y = 2.5\sin 70° \approx 2.35$

$(-0.9, -2.4)$

26. $\boxed{2 = r\cos(\theta - 60^\circ)}$



$4 = 11\cos$

$r = 11\cos\theta$

22. $r = 11\sec(\theta + \frac{7\pi}{6})$

$\frac{r}{1} = \frac{11}{\cos(\theta + \frac{7\pi}{6})}$

$11 = r\cos(\theta + \frac{7\pi}{6})$

$11 = r(\cos\theta\cos\frac{7\pi}{6} - \sin\theta\sin\frac{7\pi}{6})$

$11 = r(\cos\theta \cdot \frac{\sqrt{3}}{2} - \sin\theta \cdot \frac{1}{2})$

$11 = -\frac{\sqrt{3}}{2}r\cos\theta + \frac{1}{2}r\sin\theta$

$22 = -\sqrt{3}x + y$

$-\sqrt{3}x + y - 22 = 0$

$r \cdot r = 11 r\cos\theta$

$x^2 + y^2 = 11x$

$x^2 + y^2 = r^2$

$x = r\cos\theta$

Lesson 9-3 *(Pages 568–573)*

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

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

4. $\left(2, \frac{\pi}{4}\right)$ **5.** $\left(\frac{1}{4}, \frac{\pi}{2}\right)$ **6.** $(5, 240°)$

Write each rectangular equation in polar form.

7. $x = -2$

8. $y = 6$

$r\cos\theta = -2$

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

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

$r = \pm 6$

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

$\frac{r^2}{r} = \frac{3r\sin\theta}{r}$

$r = 3\sin\theta$

Write each polar equation in rectangular form.

11. $r^2 = 4^2$

$x^2+y^2 = 16$

12. $r = 4\cos\theta$

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

$6^2 + 5^2 = h^2$

$61 = h^2$

Lesson 9-4 *(Pages 574–579)*

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

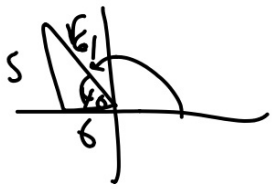
1. $6x - 5y + 6 = 0$

2. $3x + 9y = 90$

$-\frac{6}{\sqrt{61}} \quad -\frac{-5}{\sqrt{61}} \quad -\frac{6}{\sqrt{61}} \quad +\frac{0}{\sqrt{61}}$

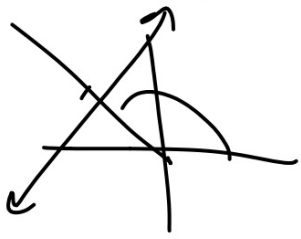
$P = r\cos(\theta - \phi)$

$-\frac{6}{\sqrt{61}}x + \frac{5}{\sqrt{61}} - \frac{6}{\sqrt{61}} = 0 = r\cos(\theta - 140)$



$\frac{6\sqrt{61}}{61}$

0.8



Write each equation in rectangular form.

3. $8 = r\cos(\theta - 30°)$

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

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. $r = 4\theta$

9.5 Complex numbers