

**POLAR GRAPHS  
PART I**

- |                          |                             |   |
|--------------------------|-----------------------------|---|
| 1. $r = 3$               | 2. $r \sec 5\theta = 5$     | 3. $\theta = \frac{-\pi}{2}$                          |
| 4. $r = -2$              | 5. $r = -2 \sin \theta$     | 6. $r = -2 \cos \theta$                               |
| 7. $1 + 1 \sin \theta$   | 8. $2 - 3 \cos \theta$      | 9. $-1 + 3 \cos \theta = r$                           |
| 10. $r = 4 \sin 2\theta$ | 11. $r = 3 + 2 \cos \theta$ | 12. $2 = r \cos \left(\theta + \frac{5\pi}{6}\right)$ |

**POLAR GRAPHS  
PART II**

- |                              |   |                               |
|------------------------------|---|-------------------------------|
| 1. $1 - 2 \sin \theta = r$   | 2. $2 - 1 \cos \theta = r$                            | 3. $2 + 2 \sin \theta = r$    |
| 4. $4 \cos 2\theta = r$      | 5. $r = 4 \cos \theta$                                | 6. $-4 \cos 3\theta = r$      |
| 7. $\theta = \frac{7\pi}{6}$ | 8. $2 = r \sin \left(\theta - \frac{11\pi}{6}\right)$ | 9. $3 \csc(\theta + \pi) = r$ |
| 10. $2 \sin 5\theta = r$     | 11. $r = -3$  | 12. $2 - \cos \theta = r$     |