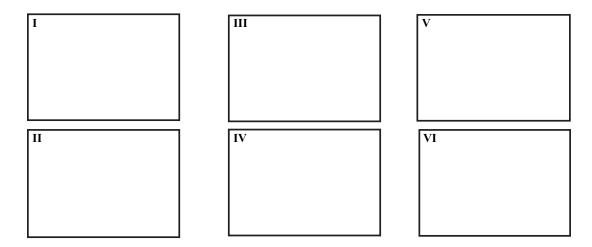
Polar Functions Worksheet



- 1. Translate $x^2 2x + y^2 = 6$ into a polar function.
- 6. Translate $y = x + 2x^2$ into a polar function.
- 2. Translate $r^2 \cos(2\theta) = a^2$ into a rectangular equation.
- 7. Translate $\theta r \cos(\theta) = 0$ into a rectangular equation.
- 3. Sketch the function $r = \theta^2$, for $0 \le \theta \le \pi$ in frame **I**.
- 8. Sketch the function $r = \theta \cos(\theta)$, for $0 \le \theta \le \frac{3\pi}{2}$ in frame **IV**.
- 4. Sketch the function $r = \theta + \cos(\theta)$, for $\frac{\pi}{2} \le \theta \le \frac{3\pi}{2}$ in frame II.
- 9. Sketch the function $r = \sin(3\theta)$, for $0 \le \theta \le \frac{\pi}{2}$ in frame **V**.
- 5. Sketch the function $r = \theta \sin(\theta)$, for $0 \le \theta \le \pi$ in frame III.
- 10. Sketch the function $r = \cos(4\theta)$, for $\pi \le \theta \le \frac{3\pi}{2}$ in frame **VI**.

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