3.14B Polar Function Graphs

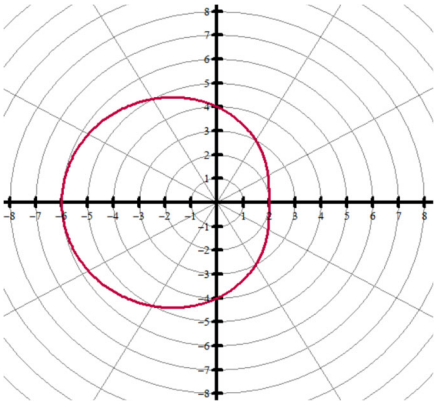
AP Precalculus

Name: _____

CA #1

Circle the correct equation for the following polar graphs.

1.



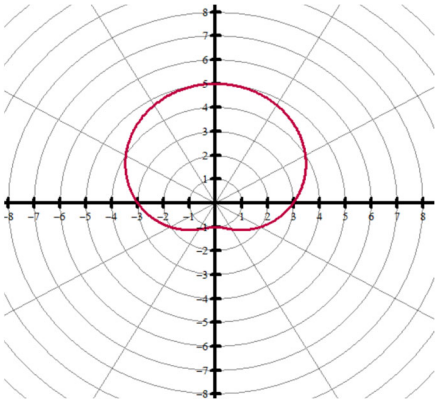
$r = 4 + 2\cos(\theta)$ $r = 4 + 2\sin(\theta)$

$r = 2 - 4\cos(\theta)$ $r = 2 - 4\sin(\theta)$

$r = 4 - 2\cos(\theta)$ $r = 4 - 2\sin(\theta)$

$r = 2 + 4\cos(\theta)$ $r = 2 + 4\sin(\theta)$

2.



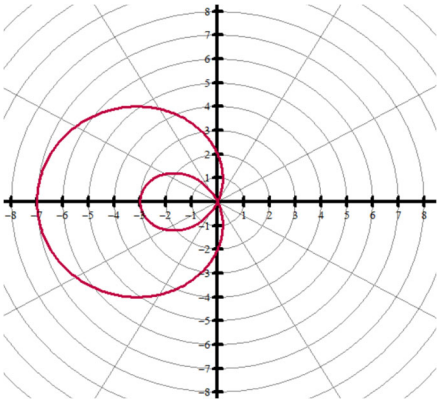
$r = 3 + 2\cos(\theta)$ $r = 3 + 2\sin(\theta)$

$r = 2 - 3\cos(\theta)$ $r = 2 - 3\sin(\theta)$

$r = 3 - 2\cos(\theta)$ $r = 3 - 2\sin(\theta)$

$r = 2 + 3\cos(\theta)$ $r = 2 + 3\sin(\theta)$

3.



$r = 3 + 4\cos(\theta)$ $r = 4 + 3\sin(\theta)$

$r = 3 - 4\cos(\theta)$ $r = 4 - 3\sin(\theta)$

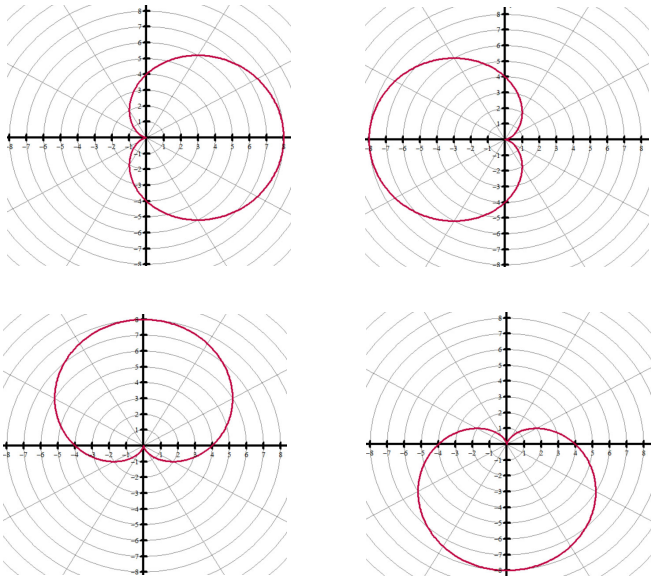
$r = 3 - 5\cos(\theta)$ $r = 3 - 5\sin(\theta)$

$r = 5 - 3\cos(\theta)$ $r = 5 - 3\sin(\theta)$

Circle the correct graph for the polar equation.

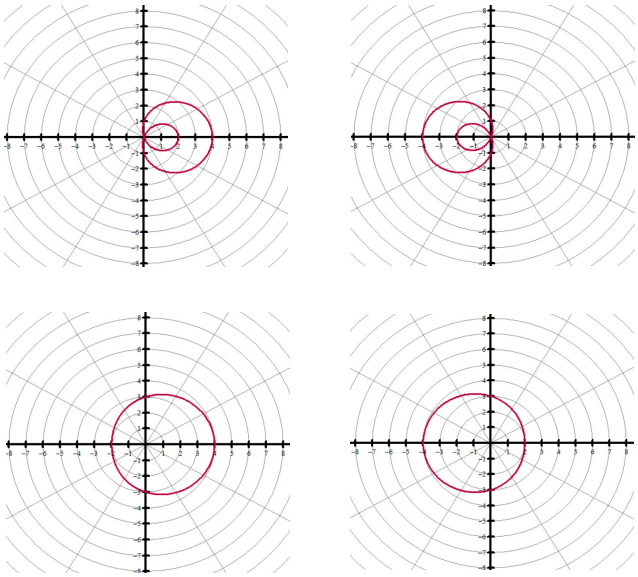
4.

$r = 4 - 4\sin(\theta)$



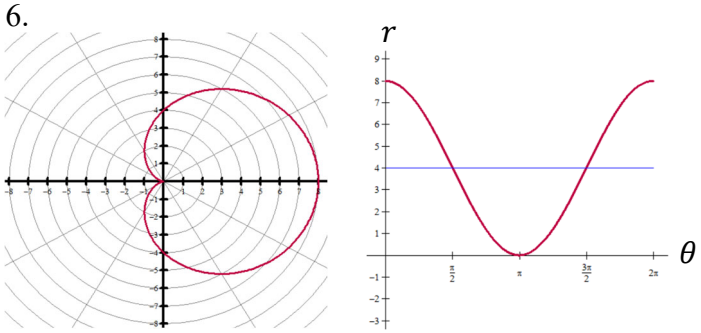
5.

$r = 1 + 3\cos(\theta)$



Use the graphs of the polar function $r = f(\theta)$ and $y = f(\theta)$ for $0 \le \theta \le 2\pi$ to answer the following.

6.

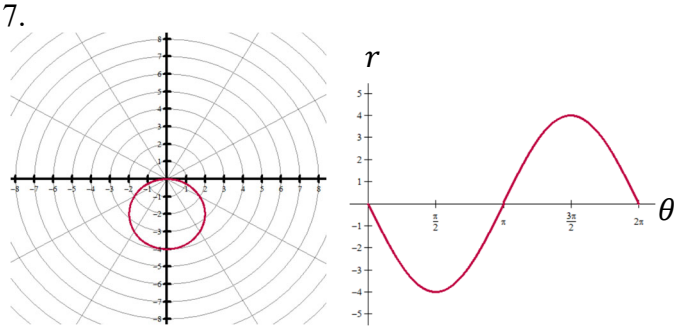


If the domain of f is restricted to $\frac{\pi}{2} \le \theta \le \pi$,

a. Is the function positive or negative?

b. Is the function increasing or decreasing?

7.

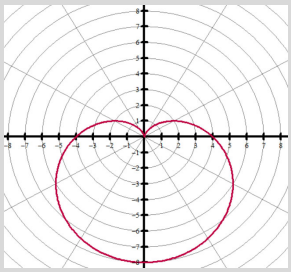
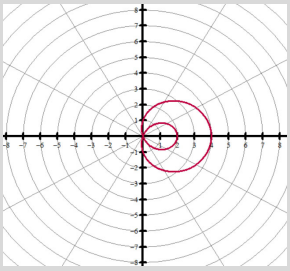


If the domain of f is restricted to $\frac{\pi}{2} \le \theta \le \pi$,

a. Is the function positive or negative?

b. Is the function increasing or decreasing?

Answers to 3.14B CA #1

1. $r = 4 - 2\cos(\theta)$	2. $r = 3 + 2\sin(\theta)$	3. $r = 3 - 5\cos(\theta)$
4. 	5. 	6. a. positive b. decreasing
7. a. negative b. increasing		