

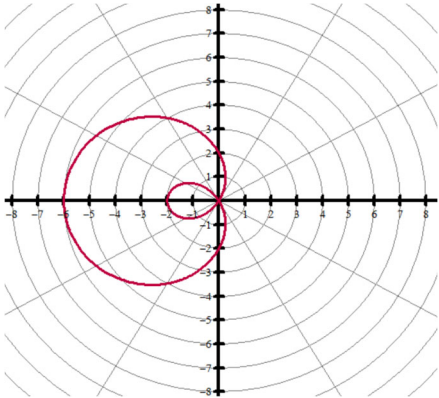
3.14B Polar Function Graphs

AP Precalculus

Name: _____

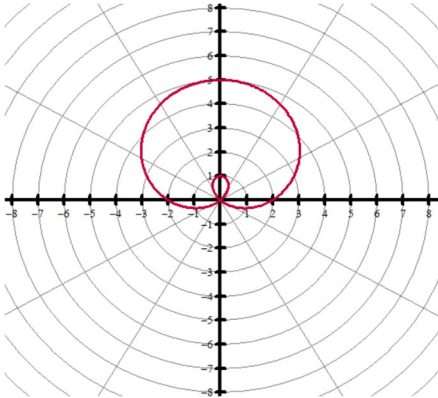
Circle the correct equation for the following polar graphs.

1.



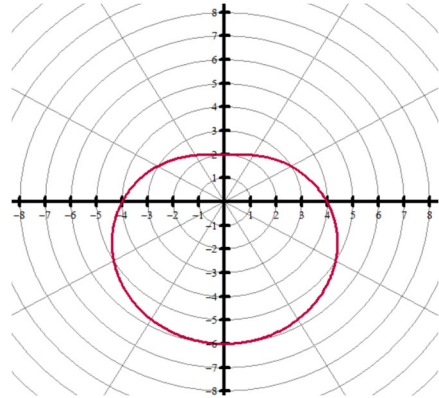
$r = 4 + 2 \cos(\theta)$ $r = 4 + 2 \sin(\theta)$
 $r = 2 - 4 \cos(\theta)$ $r = 2 - 4 \sin(\theta)$
 $r = 4 - 2 \cos(\theta)$ $r = 4 - 2 \sin(\theta)$
 $r = 2 + \cos(\theta)$ $r = 2 + 4 \sin(\theta)$

2.



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

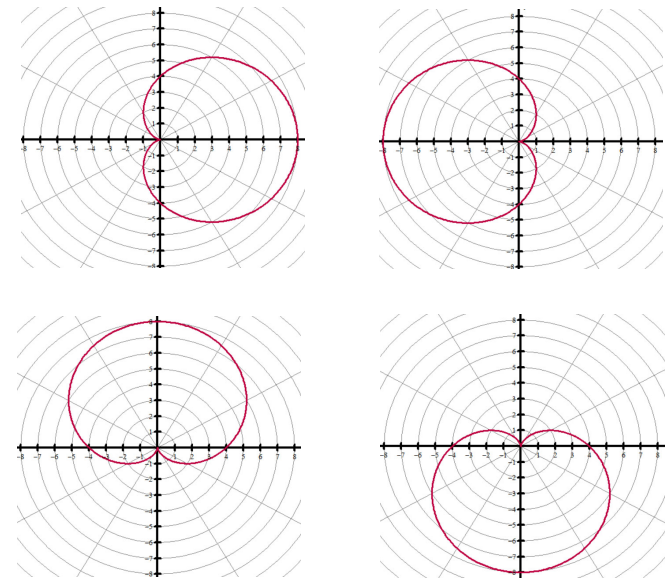
3.



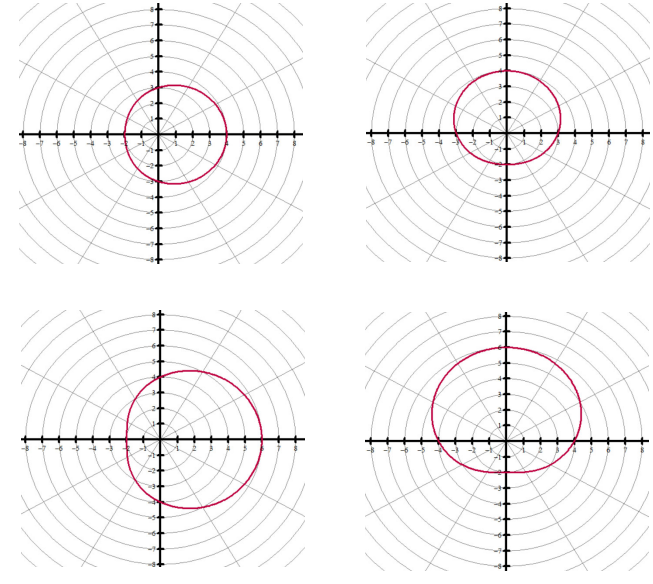
$r = 3 + 3 \cos(\theta)$ $r = 3 + 3 \sin(\theta)$
 $r = 3 - 3 \cos(\theta)$ $r = 3 - 3 \sin(\theta)$
 $r = 2 - 4 \cos(\theta)$ $r = 2 - 4 \sin(\theta)$
 $r = 4 - 2 \cos(\theta)$ $r = 4 - 2 \sin(\theta)$

Circle the correct graph for the polar equation.

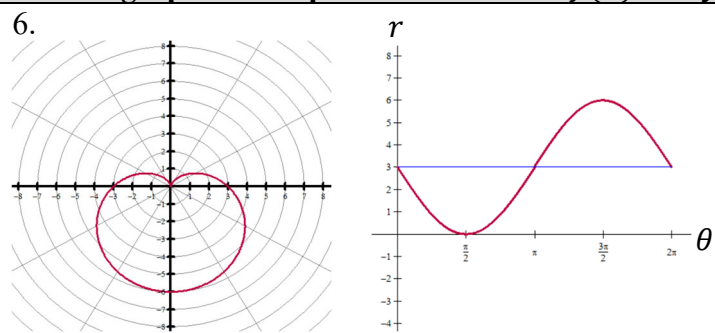
4. $r = 4 + 4 \sin(\theta)$



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

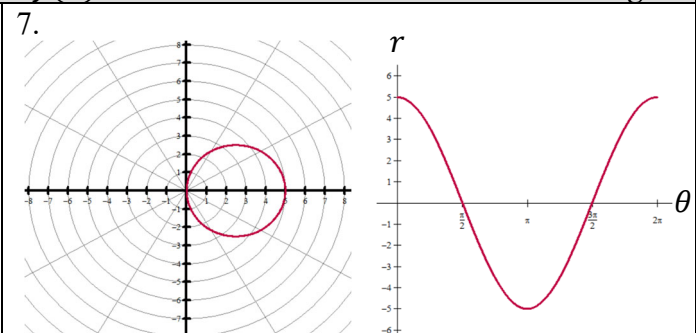


Use the graphs of the polar function $r = f(\theta)$ and $y = f(\theta)$ for $0 \leq \theta \leq 2\pi$ to answer the following.



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

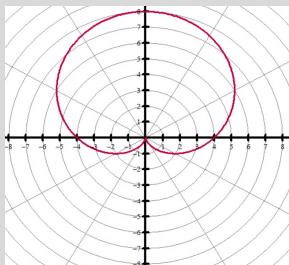
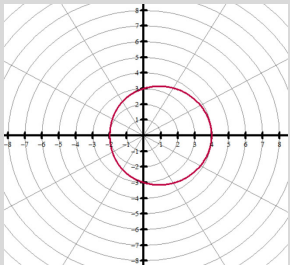
- Is the function positive or negative?
- Is the function increasing or decreasing?



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

- Is the function positive or negative?
- Is the function increasing or decreasing?

Answers to 3.14B CA #2

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