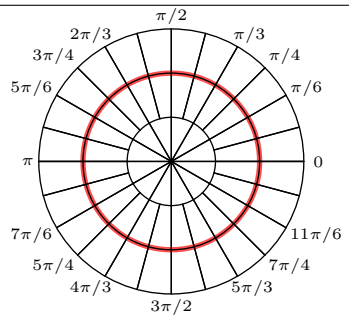
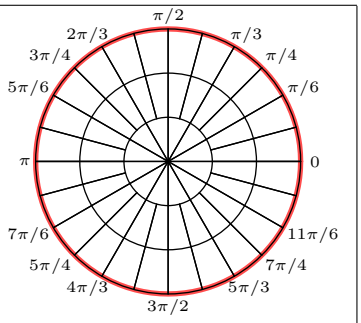
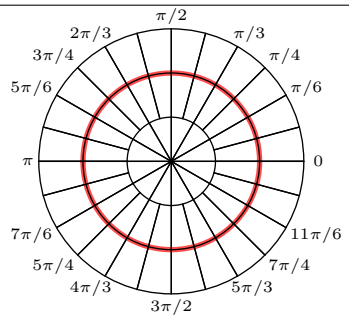
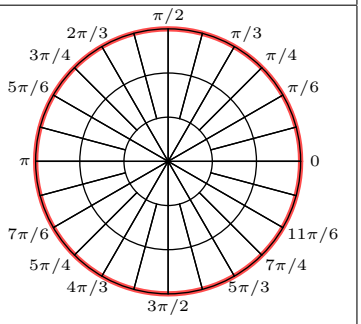
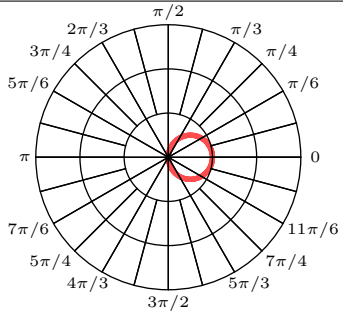
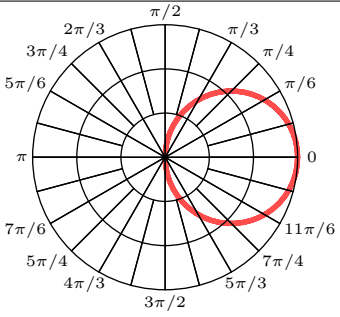
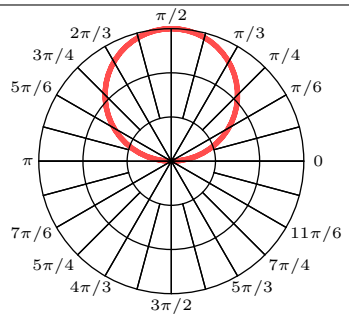
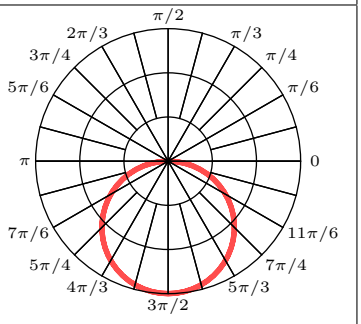
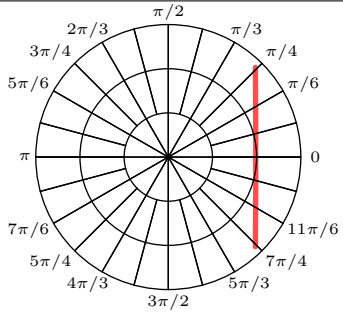
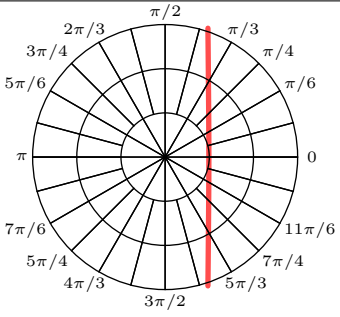
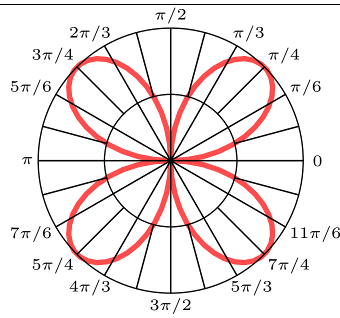
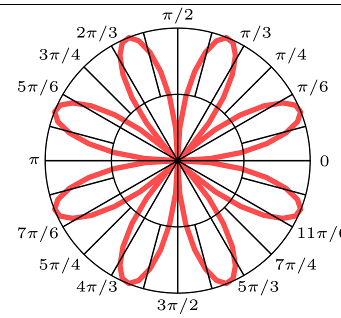
Desmos Polar Graph Challenge Plot the graphs below in Desmos. The left-hand graph's equation is given. Determine the right-hand graph's equation using logic and a bit of trial-and-error.

1) $r = 2$ 	$r =$ 
2) $r = -2$ 	(different) $r =$ 
3) $r = \cos(\theta)$ 	$r =$ 
4) $r = 3\sin(\theta)$ 	$r =$ 
5) $r = 2\sec(\theta)$ 	$r =$ 

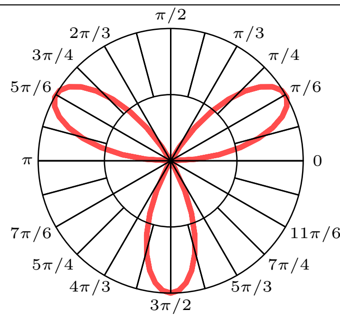
In problems 6 and 7, one example is given followed by three challenges. Finally, 8 and 9 are challenges with no examples.



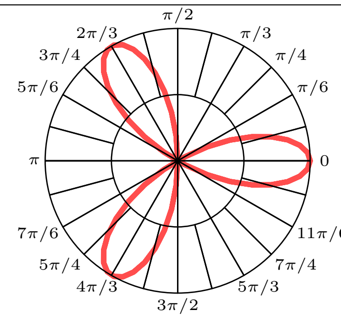
6) $r = 2\sin 2\theta$



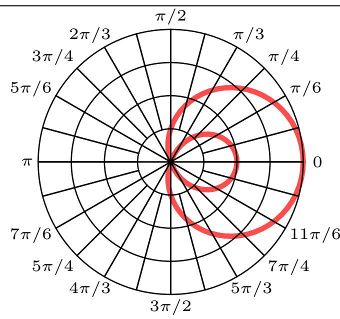
$r =$



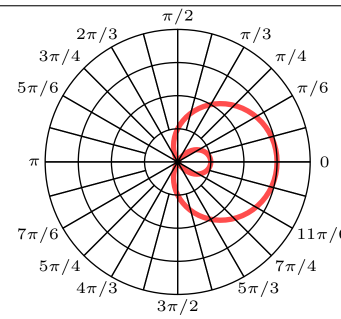
$r =$



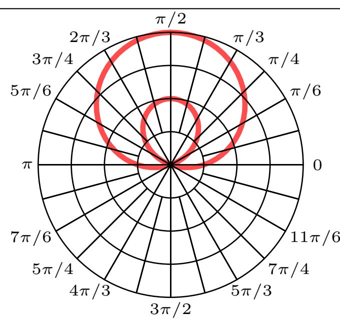
$r =$



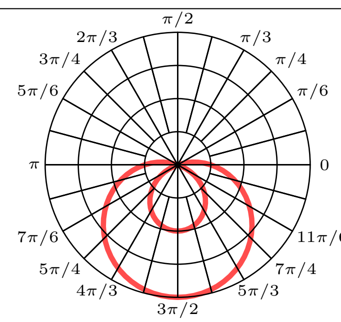
7) $r = 1 + 3\cos\theta$



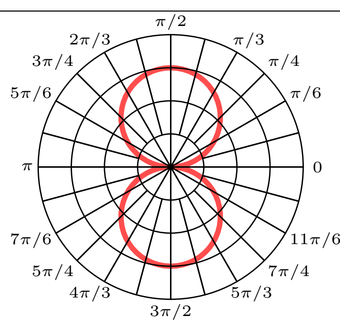
$r =$



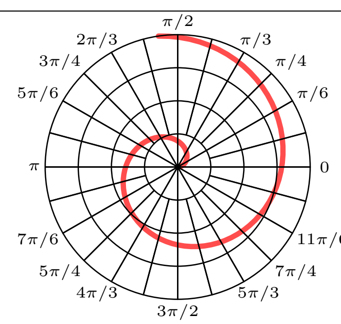
$r =$



$r =$



8) $r =$



9) $r =$

Closing task: Make your own equation with an interesting graph. Copy it onto the whiteboard and be prepared to explain it to the class. Don't just pick a random silly equation you can't explain! Write your equation below.