

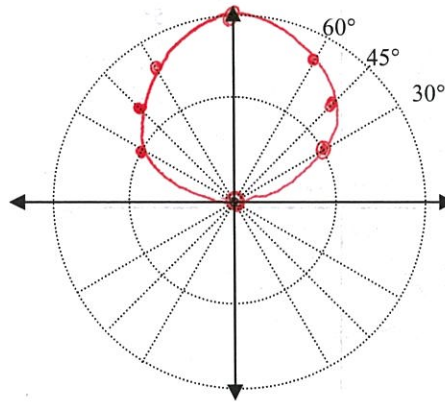
Name: Key

9.2 Graphs of Polar equations

1) Sketch a polar graph of $r = 2\sin\theta$

θ	0°	30°	45°	60°	90°	120°	135°	150°
r	0	1	1.4	1.7	2	1.7	1.4	1

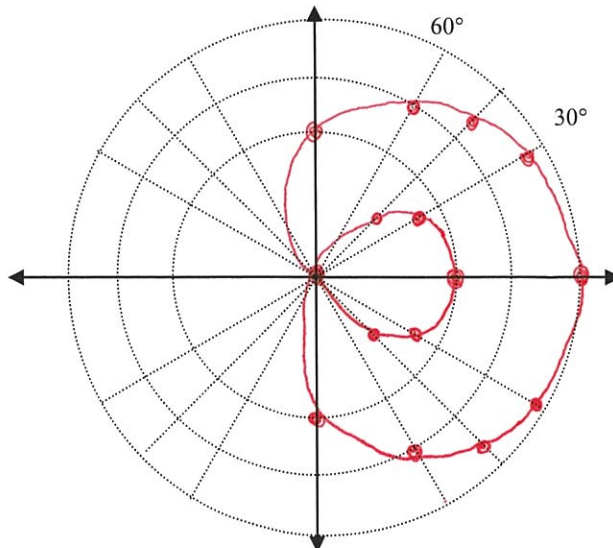
θ	180°	210°	225°	240°	270°	300°	315°	330°
r	0	-1	-1.4	-1.7	-2	-1.7	-1.4	-1



2) Sketch the polar graph of $r = 2\cos\theta - 1$

θ	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	$\frac{2\pi}{3}$	$\frac{3\pi}{4}$	$\frac{5\pi}{6}$
r	1	.73	.41	0	-1	-2	-2.4	-2.7

θ	π	$\frac{7\pi}{6}$	$\frac{5\pi}{4}$	$\frac{4\pi}{3}$	$\frac{3\pi}{2}$	$\frac{5\pi}{3}$	$\frac{7\pi}{4}$	$\frac{11\pi}{6}$
r	-3	-2.7	-2.4	-2	-1	0	.4	.7



3) Sketch a polar graph of $r = \frac{1}{2} \theta$

θ	0°	30°	45°	60°	90°	120°	135°	150°
r	0	.26	.39	.52	.79	1.04	1.18	1.31
θ	180°	210°	225°	240°	270°	300°	315°	330°
r	1.57	1.83	1.96	2.09	2.36	2.62	2.75	2.88

note:

360°

π

