

(4) Convert the equations below from rectangular equations to polar equations.

(a) $x^2 + y^2 = 20$

$$r^2 = 20$$

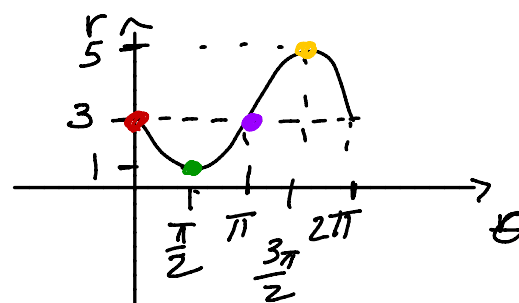
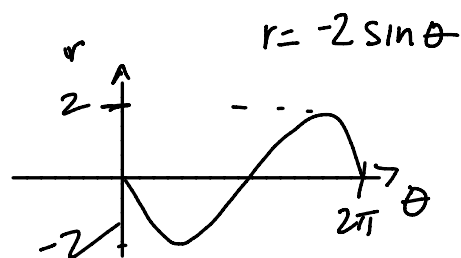
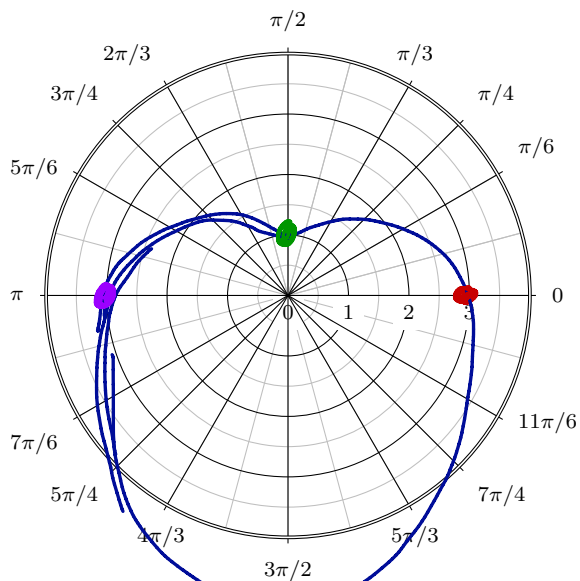
(b) $y = 5x^2$ $r \sin \theta = 5 r^2 \cos^2 \theta$

or $\sin \theta = 5 r \cos^2 \theta$

or $r = \frac{1}{5} \tan \theta$

(5) Sketch the graph of the polar equations below.

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



(b) $r = 2 \cos(3\theta)$

