

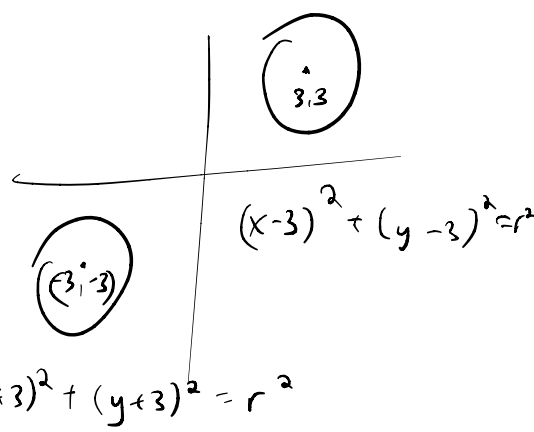
3-5-22

30)  $(x+4)^2 \leftarrow +$

$(x-h)^2 + (y-k)^2 = r^2$

$-h \quad (-) \rightarrow$

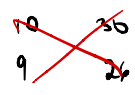
$-k \quad (-) \uparrow$



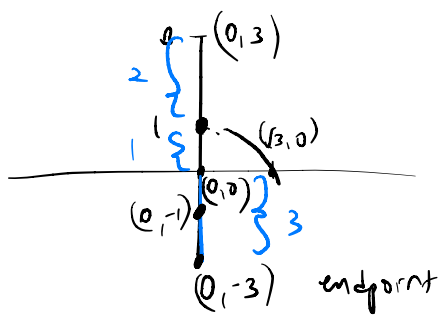
41)



$y = x + 11$  is ok



44)



Draw this better

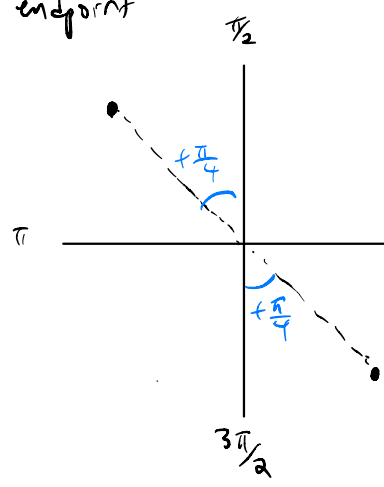
$\tan \theta = \frac{\text{opp}}{\text{adj}} = \frac{y}{x}$

51)  $\left[ \frac{3\pi}{4} \quad \frac{7\pi}{4} \right)$

$\frac{\pi}{6} = 30^\circ$

$\frac{\pi}{4} = 45^\circ$

$\frac{\pi}{3} = 60^\circ$



Negative when  
 $x (+)$   
 $y (-)$  Q IV  
 $x (-)$   
 $y (+)$  Q II

52)  $V_{\text{cylinder}} = \pi r^2 h$



$$V_{\text{first}} = 6\pi$$

$$\begin{aligned} V_{\text{second}} &= 1.5^2 \pi h \\ &= 2.25 \pi h \end{aligned}$$

$$6\pi = 2.25\pi h$$

$$6 = 2.25h$$

$$h = \frac{6}{2.25} = \frac{8}{3} = 2\frac{2}{3}$$

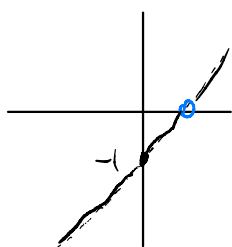
53) We don't care too much about  
 $s = 4, 5, 6$

$$\begin{aligned} s &= 3 \\ n &= 4 \end{aligned} \Rightarrow 9$$

$$\begin{aligned} C. \quad n s - s &= 9 \\ s(n-1) \end{aligned}$$

66)

$$y = \frac{(x-1)(x-1)}{(x-1)} = x-1$$



Calculus  
 "math involving change"



$$V_{\text{cone}} = \frac{\pi r^2 h}{3}$$

"once you pour it in,  
 the second glass is  
 only half full"

$$6 = 2.25h$$

$$6 = 4.5h$$

$$h = \frac{4}{3}$$

If given diagram, use it  
 and questions actually

$$x \neq 1$$