

Sample Test 3 Solns

① F $2x+y=7 \Rightarrow y=-2x+7$ so slope of given line is -2 , not 2

② T ③ F horizontal ④ T ⑤ T

⑥ Slope of given line is 3 so perpendicular line has slope $-\frac{1}{3}$

⑦ Put $y=3$ into $11x-5y=7 \Rightarrow 11x-5(3)=7$ so $(2,3)$
 $11x-15=7$
 $11x=22$
 $x=2$

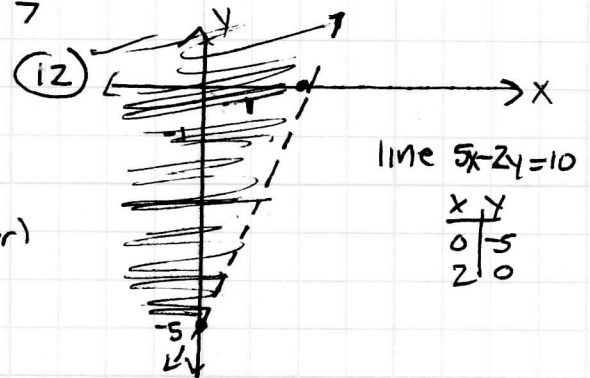
⑧ Find y -intercept by letting $x=0$
 $5(0)-2y=8 \Rightarrow -2y=8 \Rightarrow y=-4, (0,-4)$

⑨ All solutions of the equation. ⑩ undefined

⑪ Given line, find slope by solving for $y \Rightarrow y=\frac{4}{3}x+\frac{7}{3}$ so $m=\frac{4}{3}$

⑫ Given points use $m=\frac{y_2-y_1}{x_2-x_1} = \frac{3-1}{\frac{1}{2}-4} = \frac{2}{-7\frac{1}{2}} = -\frac{4}{7}$

⑬ Given line, slope = $\frac{\text{vertical change}}{\text{horizontal}} = -\frac{5}{3}$



⑬ a) $y=mx+b \Rightarrow y=6x+5$

b) Find slope $m = \frac{3-1}{-4-3} = -\frac{2}{7}$

Use point slope $y-y_1=m(x-x_1)$ with pt $(3,1)$ (either)

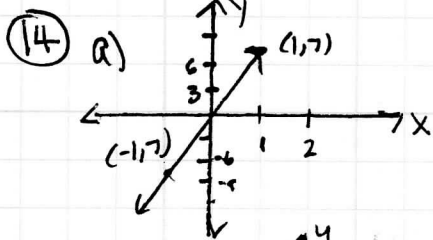
$$y-1 = -\frac{2}{7}(x-3) \dots \Rightarrow y = -\frac{2}{7}x + \frac{13}{7}$$

c) $m=0$, horizontal $y=2$

d) Find slope of $2x+5y=7$ (it's $-\frac{2}{5}$) Our line is parallel so our $m = -\frac{2}{5}$

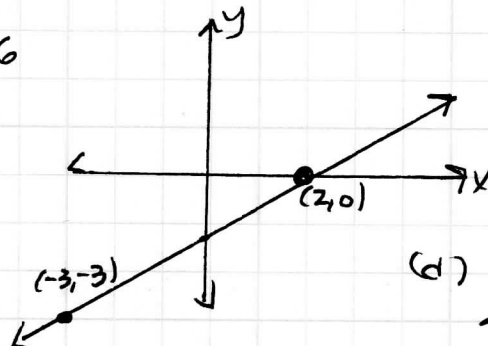
Then use $y-y_1=m(x-x_1)$ with $(-3,5) \Rightarrow y-5 = -\frac{2}{5}(x+3) \dots \Rightarrow y = -\frac{2}{5}x + \frac{19}{5}$

e) Find slope of $y = \frac{2}{3}x - 1$ (it's $\frac{2}{3}$). Since our line is perpendicular our $m = -\frac{3}{2}$
 so eqn is $y = -\frac{3}{2}x + 8$

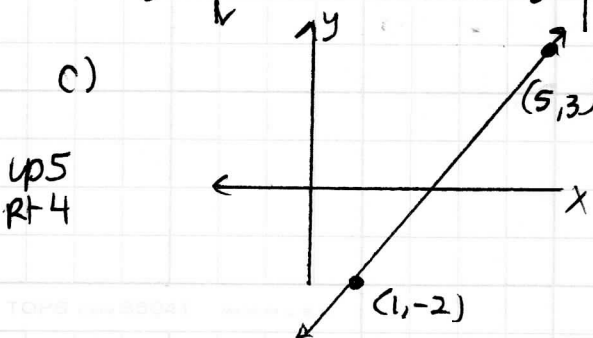
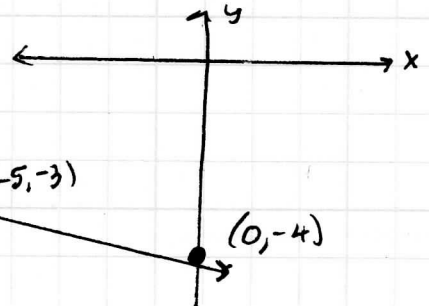


b) $3x-5y=6$

x	y
2	0
0	-6/5
-3	-3



(d) $y = -\frac{1}{5}x - 4$ y -int is -4
 $m = -\frac{1}{5}$



up 5
 rt 4