

Mr. Hansen

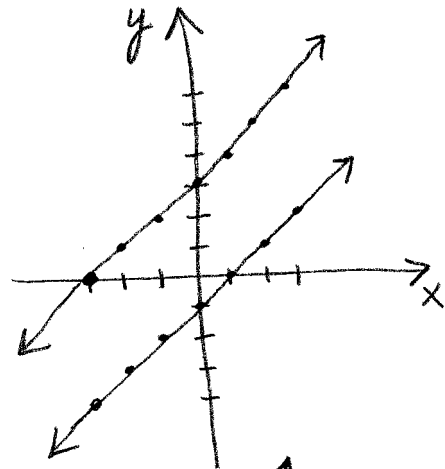
Geom. HW due 4/10/2009

§13.1 # 1, 4, 8, 9, 12; §13.2 # 4, 6, 9, 13-16

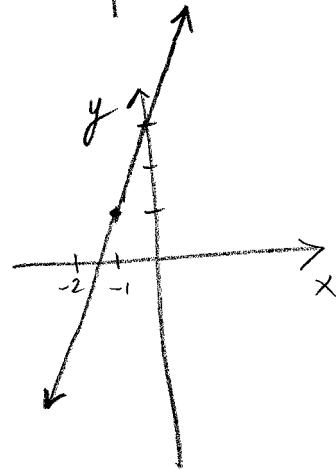
§13.1 #1.

X	$y = x + 3$
-3	0
-2	1
-1	2
0	3
1	4
2	5
3	6

X	$y = x - 1$
-3	-4
-2	-3
-1	-2
0	-1
1	0
2	1
3	2



4. $y - 1 = 2(x + 1)$
 By insp. [point-slope form!],
 line passes through $(-1, 1)$ with
 slope 2.

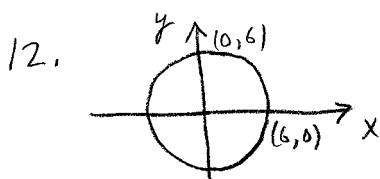


8. $y = 2x - 3$
 Plug in $(5, 4)$:
 $4 \neq 2(5) - 3$
 $4 \neq 10 - 3$

NO!

9. $y = |x - 2|$
 Plug in $(-4, 6)$:
 $6 \neq |-4 - 2|$
 $6 \neq |-6|$

YES.



Each point (x, y) of the circle
 must be 6 units from the origin.
 By dist. formula, $\sqrt{(x-0)^2 + (y-0)^2} = 6$
 $\therefore x^2 + y^2 = 36$

§13.2

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4. Line $\perp$ to x-axis $\Rightarrow$ vertical

Passing through $(8,1) \Rightarrow \boxed{x=8}$

6. a) $b=2, m=4$

$$\boxed{y=4x+2}$$

b) $m=5$; passes through $(0,-2) \Rightarrow b=-2$

$$\boxed{y=5x-2}$$

c) $\parallel$ to graph of $y=10x-6 \Rightarrow m=10$
 $b=1$

$$\boxed{y=10x+1}$$

d) $\perp$ to graph of $2y=x+16$
 $y=\frac{1}{2}x+8$

$\Rightarrow m$ of our line $= -2$

passes through $(0,-5) \Rightarrow b=-5$

$$\boxed{y=-2x-5}$$

e) Given: $b=2$

$\perp$ to line through $(-4,6)$ and $(1,11) \Rightarrow$
 $\perp$ to line with $m = \frac{\Delta y}{\Delta x} = \frac{11-6}{1-(-4)} = \frac{5}{5} = 1$

$\Rightarrow m$ of our line $= -1$

$$\boxed{y=-x+2}$$

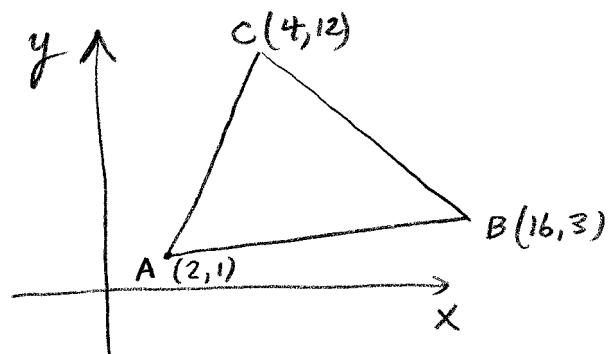
9. Given: $y=8x-1$, $(k,5)$ on the line

$$\therefore 5=8(k)-1$$

$$6=8k$$

$$\boxed{\frac{3}{4}} = k$$

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13. $\parallel$ to $\overleftrightarrow{AB} \Rightarrow m = \frac{\Delta y}{\Delta x} = \frac{3-1}{16-2} = \frac{2}{14} = \frac{1}{7}$
through C $\Rightarrow (4,12)$ is on the line

$$y - 12 = \frac{1}{7}(x - 4)$$

14. $\perp$ bisector of $\overline{AB}$ must have $m = -7$
and must pass through mdpt. $= (x_{av}, y_{av}) = \left(\frac{2+16}{2}, \frac{1+3}{2}\right) = (9, 2)$

$$y - 2 = -7(x - 9)$$

15. Alt. from C to $\overline{AB}$ must also have $m = -7$
(as in #14). Passing through C $\Rightarrow (4,12)$ is on the line.

$$y - 12 = -7(x - 4)$$

16. Med. from C to $\overline{AB}$ passes through $(9, 2)$ [from #14]
and C = $(4, 12)$. $\therefore m = \frac{\Delta y}{\Delta x} = \frac{12-2}{4-9} = -2$

$$y - 12 = -2(x - 4) \quad \text{or} \quad y - 2 = -2(x - 9)$$

17. mdpt. of $\overline{AC} = (x_{av}, y_{av}) = \left(\frac{2+4}{2}, \frac{1+12}{2}\right) = (3, 6.5)$
mdpt. of $\overline{BC} = (x_{av}, y_{av}) = \left(\frac{4+16}{2}, \frac{12+3}{2}\right) = (10, 7.5)$
 $m = \frac{\Delta y}{\Delta x} = \frac{7.5-6.5}{10-3} = \left(\frac{1}{7}\right)$

MUCH FASTER WAY: Apply work from #13 plus
Midline Thm. Answer = $\left(\frac{1}{7}\right)$ immediately.