HONORS ALGEBRA 2 Name_____

SUMMER ASSIGNMENT - SHOW ALL WORK!

Find each product.

1) $(6x-8)(3x+6)$

2) $(6a+7)^2$

Factor each completely.

3) $x^2-4x-12$

4) $7x^2+9x-10$

5) $25v^2+30v+9$

6) $32x^2-50$

Evaluate each expression.

7) $2-(16\div -4-(4\div 4+2--6))$

Evaluate each using the values given.

8) $(n(-6-p)(n+p))\div 2$; use $n=-2$, and $p=1$

Solve each equation.

9) $-(-8n-6)+4n=90$

10) $40-5b=8(b-8)$

11) $7(r+2)+3(-2+7r)=36$

12) $4(a-3)=4a+2$

13) $v+\frac{1}{7}+1=\frac{1}{56}$

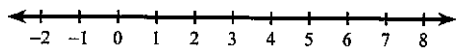
14) $-12.38-1.7x=-2.7x-6.68$

15) $|7x+2|=54$

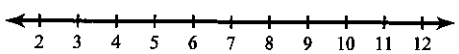
16) $5|2m-4|+3=73$

Solve each inequality and graph its solution.

17) $100 < 5(2x + 8)$

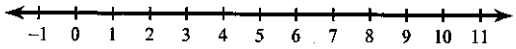


18) $-5a + 17 \leq -4(-a + 7)$

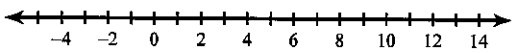


Solve each compound inequality and graph its solution.

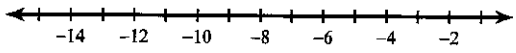
19) $3 > 5 - b \geq -4$



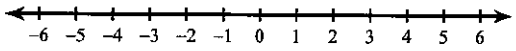
20) $m - 1 > 8$ or $8m - 7 \leq -15$



21) $5 - 3v \leq 17$ or $10v + 2 \leq -98$

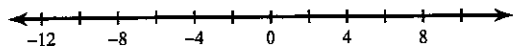


22) $2x + 6 > 3 + 2x$ and $-6x - 3 < 5x - 3$

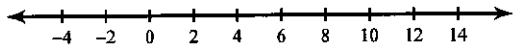


Solve each inequality and graph its solution.

23) $|-2a| + 9 < 27$



24) $|-6 + r| + 7 \geq 13$



Find the x-intercept and y-intercept.

25) $7x + 3y = -6$

26) $y = -1$

Find the slope of each problem.

27) $(-1, 7), (-11, 4)$

28) $7x - 2y = -10$

Write the slope-intercept form of the equation of each line.

29) $y + 4 = -\frac{3}{2}(x - 2)$

30) $3 = -3x + \frac{3}{4}y$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

31) through: $(4, 4)$, slope $= \frac{1}{4}$

Write the slope-intercept form of the equation of the line through the given points.

32) through: $(4, -1)$ and $(-1, -2)$

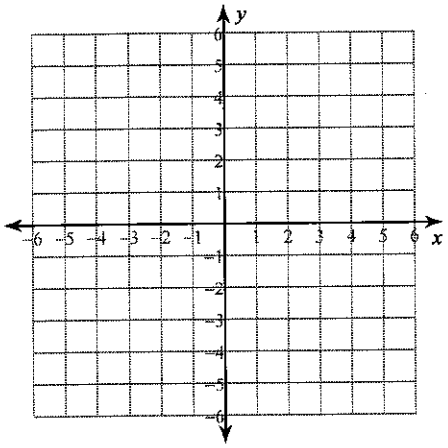
Write the standard form of the equation of the line described.

33) through: $(-1, 3)$, parallel to $y = -\frac{5}{4}x - 1$

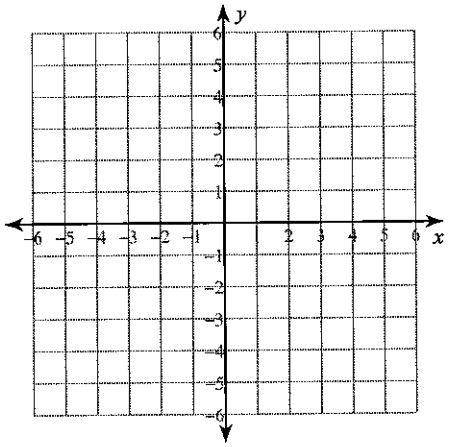
34) through: $(-4, 2)$, perp. to $y = -4x - 3$

Sketch the graph of each line.

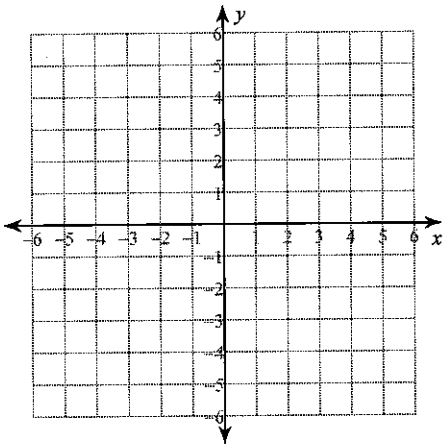
35) $y = -\frac{1}{2}x + 3$



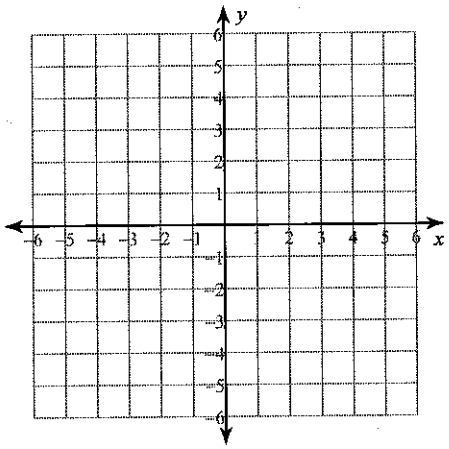
36) $7x + 2y = 10$



37) $\frac{20}{7} + \frac{4}{7}y = -2x$



38) $y > -\frac{4}{5}x + 4$



Solve each system by substitution or elimination.

39) $x - 8y = 21$
$-4x - 3y = -14$

40) $-7x - 7y = -14$
$-5x + 5y = 0$