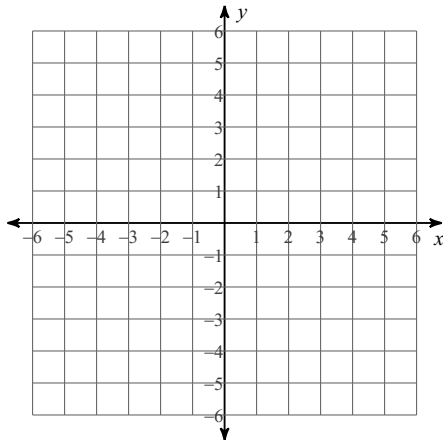


SM2 HW 3-6 (Unit 3 Test Preview HW)

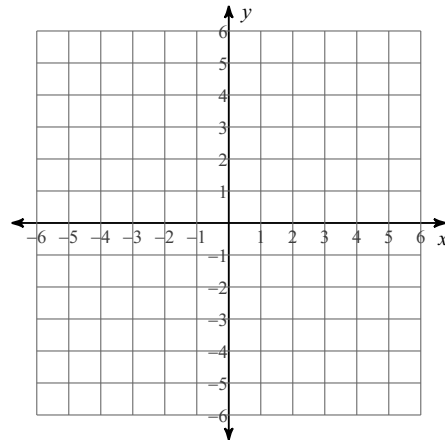
Date _____ Period _____

Sketch the graph of each line.

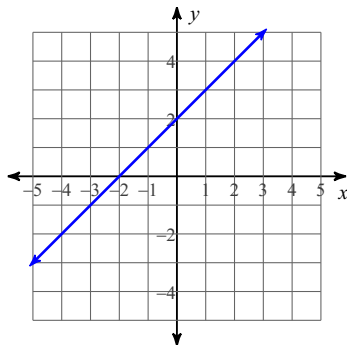
1) $x + 5y = -10$



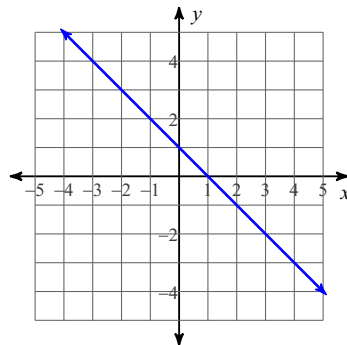
2) $2x - y = 4$

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

3)



4)



5) $5x - 4y = -32$

6) $x - 6y = -2$

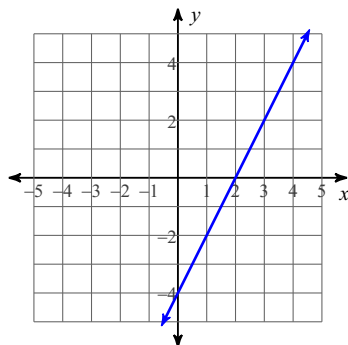
Write the slope-intercept form of the equation of the line through the given points.

7) through: $(-4, 3)$ and $(3, 5)$

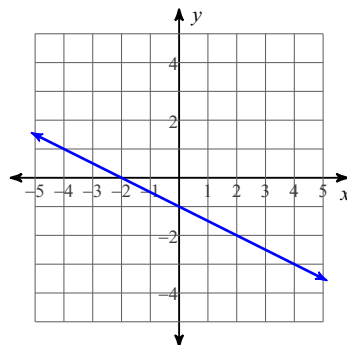
8) through: $(-5, -5)$ and $(-2, 2)$

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

9)



10)



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

11) through: $(-5, -1)$, slope $= -4$

12) through: $(-5, -1)$, slope $= -\frac{4}{5}$

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

13) through: $(1, -3)$, parallel to $y = \frac{7}{3}x - 4$

14) through: $(4, 5)$, parallel to $y = \frac{1}{2}x$

15) through: $(3, 1)$, perp. to $y = \frac{2}{3}x + 2$

16) through: $(-4, 3)$, perp. to $y = \frac{2}{3}x - 4$

Solve each equation.

17) $228 = 6(8x + 6)$

18) $144 = -8n + 5(5n + 5)$

19) $10|n + 3| - 8 = 112$

20) $4 - 6|x + 1| = -32$

Simplify. Your answer should contain only positive exponents.

21) $2b^4 \cdot 4b^3 \cdot 2a^3b^4$

22) $3m^3n^{-3} \cdot 4m^3n^{-3}$

23) $(2ca^3b^{-4})^{-4}$

24) $(2x^3y^4z^{-3})^2$

25) $\left(\frac{v^3}{2vu^{-3}}\right)^4$

26) $\frac{2x^3}{(2x^2y^{-2})^{-2}}$

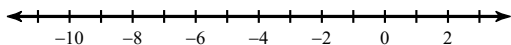
Factor the common factor out of each expression.

27) $-8n^5 + 28n^2 - 4n$

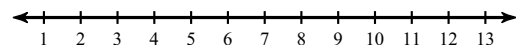
28) $-21b^3 + 18b^6 + 21b^9$

Solve each inequality and graph its solution.

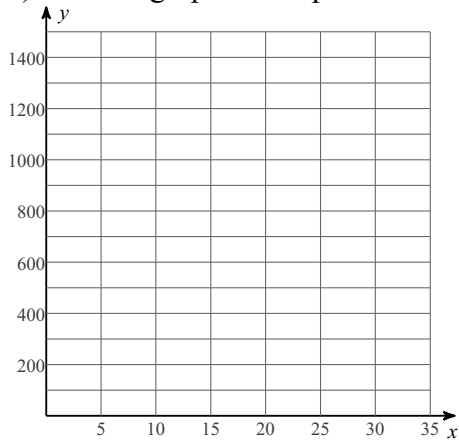
29) $3|3 + p| - 5 \leq 10$



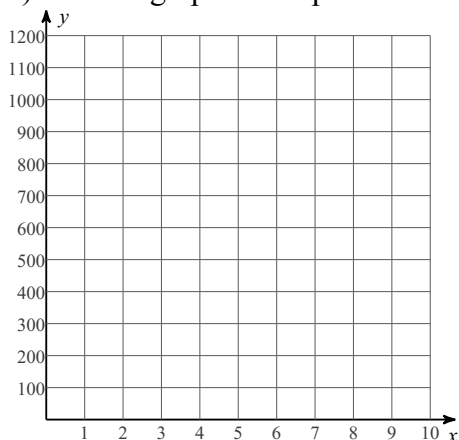
30) $6 - 3|v - 7| \leq -3$



- 31) 4. The cost of hiring a painter, C , is a function of the time spent on the job, ' t ', in hours. A painter makes a bid on the job. He estimates the paint and materials will cost \$350. If the painter charges charges for the materials plus \$23 per hour:
- Write an equation that models the situation. You will only receive credit if you write your equation using variables that represent the quantities in the problem.
 - If the job takes 32.5 hours, how much will the painter charge?
 - Draw a graph that represents "cost" as a function of "time".

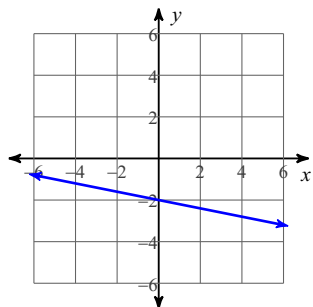


- 32) 4. The cost of car repairs at a shop, C , is a function of the time spent on the job, ' t ', in hours. "Frank's Auto" makes a bid on the job. They estimates the repair parts and materials will cost \$400. The "shop rate" for labor is \$75 per hour:
- Write an equation that models the situation. You will only receive credit if you write your equation using variables that represent the quantities in the problem.
 - If the job takes 6.5 hours, how much will the mechanic charge?
 - Draw a graph that represents "cost" as a function of "time".



Answers to SM2 HW 3-6 (Unit 3 Test Preview HW) (ID: 1)

1)



3) $y = x + 2$

5) $y = \frac{5}{4}x + 8$

7) $y = \frac{2}{7}x + \frac{29}{7}$

9) $y = 2x - 4$

11) $y = -4x - 21$

13) $y = \frac{7}{3}x - \frac{16}{3}$

15) $y = -\frac{3}{2}x + \frac{11}{2}$

17) $\{4\}$

19) $\{9, -15\}$

21) $16b^{11}a^3$

23) $\frac{b^{16}}{16c^4a^{12}}$

25) $\frac{u^{12}v^8}{16}$

27) $4n(-2n^4 + 7n - 1)$

29) $-8 \leq p \leq 2$:

31) a) $c(t) = 23t + 350$

b) \$1097.50

c)

