SM2 HW #3-2 (Unit 2 Weak Areas, Lines)

Date_____ Period____

Solve each equation.

1) $-3x + 3(4x + 7) = 84$

2) $-108 = -6 + 6(-5r - 7)$

3) $8|x + 1| - 2 = 30$

4) $-4|a + 1| + 4 = -8$

Simplify. Your answer should contain only positive exponents.

5) $4ab^{-3} \cdot 3a^2b^3$

6) $a^0 \cdot 2b^4 \cdot 2ab^{-1}$

7) $(4y^{-2}z^0)^2$

8) $(3m^2n^2p^{-2})^{-3}$

9) $\dfrac{(2x^2y^{-1})^{-1}}{2y^3}$

10) $\dfrac{2x^{-4}y^3}{(2y^{-2})^2}$

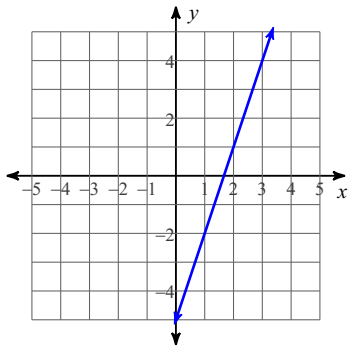
Factor the common factor out of each expression.

11) $-10x^4 + 8x^3 + 4x^2$

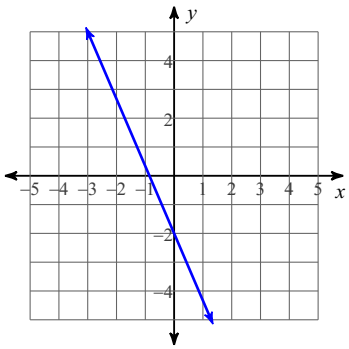
12) $-28k^3 - 36k^2 + 4k$

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

13)



14)



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

15) through: $(-1, -4)$, slope = 6

16) through: $(-2, 3)$, slope = –2

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

17) through: $(3, 0)$ and $(4, 4)$

18) through: $(3, 2)$ and $(-5, 1)$

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

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

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

21) through: $(3, 3)$, perp. to $y = -\frac{3}{5}x + 5$

22) through: $(-2, 5)$, perp. to $y = \frac{2}{9}x + 2$