Name: _____

Period: _____ Date: _____

Warm-up 62

Complete the rules for exponents

1. $a^m \cdot a^n = a^{m+n}$

2. $\frac{a^m}{a^n} = a^{m-n}$

3. $a^0 = 1$

4. $\frac{1}{a^{-n}} = \frac{a^n}{1} = a^n$

5. $(a^m)^p = a^{m \cdot p}$

Simplify each expression (Be sure to show work as demonstrated in class notes)

6. $x^5 \cdot x^3$

$= x^{5+3}$

$= x^8$

7. $(5m^5n)(4m^3n^6)$

$= 5 \cdot 4 m^5 m^3 n^1 n^6$

$= 20 m^{5+3} n^{1+6}$

$= 20 m^8 n^7$

8. $9a^{-2}b^6c^{-7}$

$= \frac{9}{1} \cdot \frac{1}{a^2} \cdot \frac{b^6}{1} \cdot \frac{1}{c^7}$

$= \frac{9b^6}{a^2c^7}$

9. $\frac{8k^6u^4}{2k^2u^9}$

$= 4k^{6-2}u^{4-9}$

$= 4k^4u^{-5}$

$= \frac{4k^4}{u^5}$

10. $(5x^3)^2$

$= 5^{1 \cdot 2} x^{3 \cdot 2}$

$= 5^2 x^6$

$= 25x^6$

Algebra 1 Name_____

Review: Solving Equations and Graphing Lines

Date_____ Period____

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Solve each equation.

1) $5a + 2 = 32$

2) $4r - 5 = 7$

$+5 \quad +5$

$\frac{4r}{4} = \frac{12}{4}$

$r = 3$

3) $-4n - 5 = -37$

$+5 \quad +5$

$\frac{-4n}{-4} = \frac{-32}{-4}$

$n = 8$

4) $3 - 4v = 31$

$-3 \quad -3$

$\frac{-4v}{-4} = \frac{28}{-4}$

$v = -7$

5) $3 + \frac{v}{10} = 4$

$-3 \quad -3$

$(10)\frac{v}{10} = 1 \cdot (10)$

$v = 10$

6) $-3 + \frac{x}{3} = -1$

7) $-2n - 3 = -13$

8) $\frac{k}{10} - 2 = -1$

9) $\frac{p}{2} + 5 = 3$

10) $\frac{x}{2} - 4 = -2$

$-1 - 2 = -3$

Combine like terms and solve each equation.

11) $-x + 2 + 1 = -2$

$-x + 3 = -2$

$-3 \quad -3$

$\frac{-1x}{-1} = \frac{-5}{-1}$

$x = 5$

12) $-p - 2p = 6$

$\frac{-3p}{-3} = \frac{6}{-3}$

$p = -2$

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13) $n + n = 6$

14) $m - 2 + 3m = 6$

$4m - 2 = 6$

$+2 \quad +2$

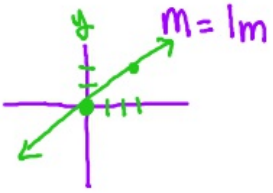
$\frac{4m}{4} = \frac{8}{4}$

$m = 2$

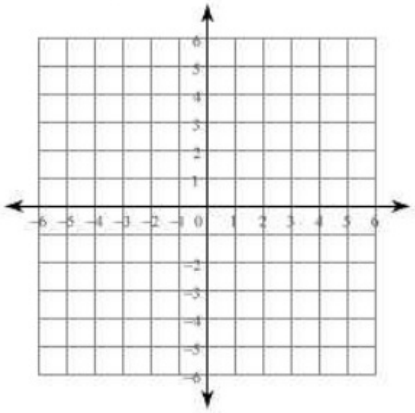
15) $2x + x = 12$

16) $1 - 2r - 2r = -3$

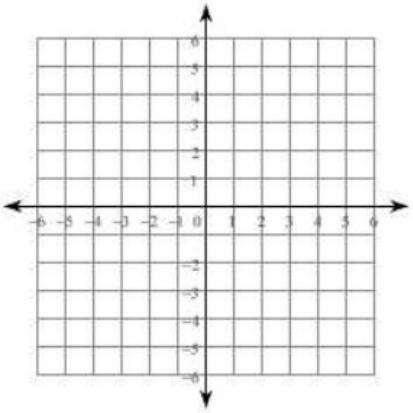
Write down the slope (m) and the y-intercept (b), then graph each line.



17) $y = -\frac{4}{3}x + 5$



18) $y = \frac{2}{3}x + 0$ m: $\frac{2}{3}$ b: 0



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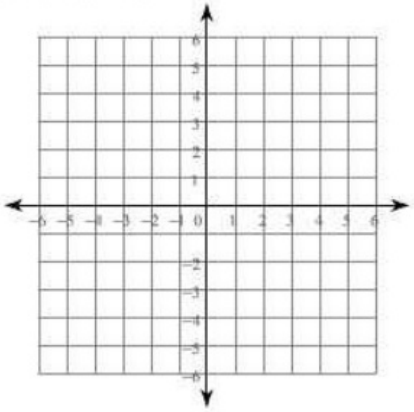
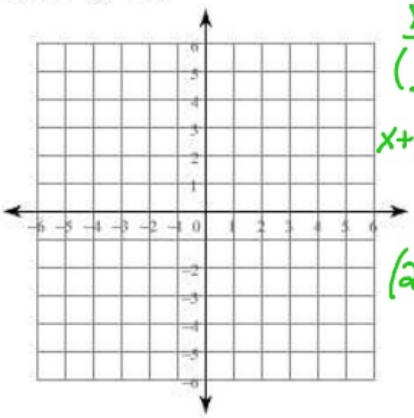
Determine the x-intercept (, 0) and the y-intercept (0,). Sketch the graph of each line.

23) $x + y = 2$

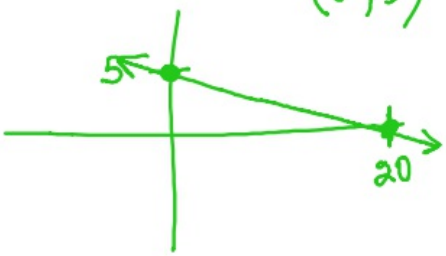


* 24) $x + 4y = 20$

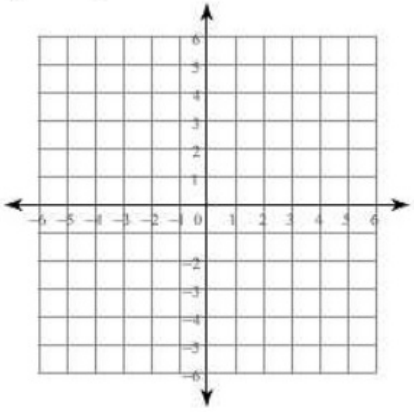


x-int
(_,0)
$x+4(0)=20$
$x=20$
(20,0)

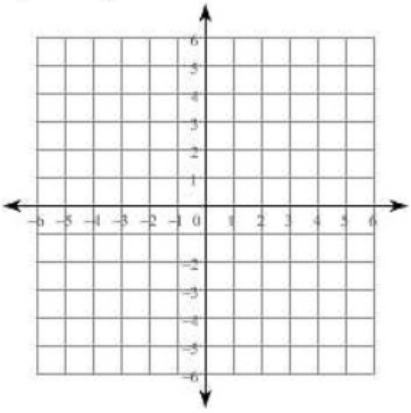
y-int
(0,_)
$(0)+4y=20$
$\frac{4y}{4}=\frac{20}{4}$
$y=5$
(0,5)



25) $x - 3y = 12$



26) $9x + 5y = -25$



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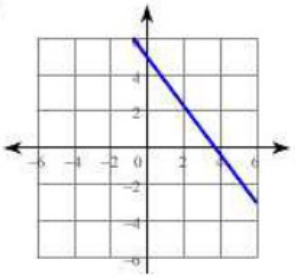
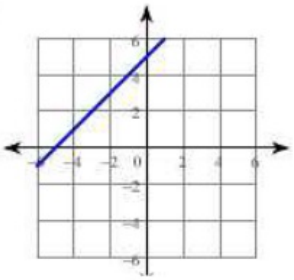
Answers to Review: Solving Equations and Graphing Lines

1) {6}
3) {8}
5) {10}
7) {5}
9) {–4}
11) {5}
13) {3}
15) {4}

17)



19)



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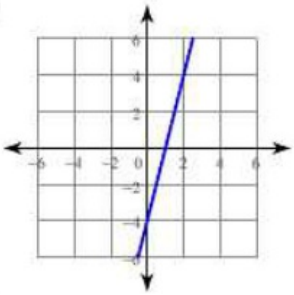

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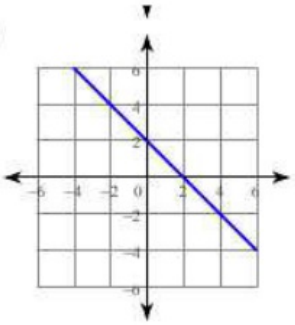

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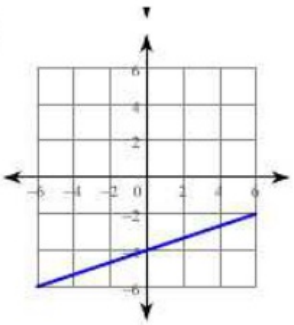

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