Algebra 2 **Name**_____
Practice A **Date**_____ **Block**____

1. Evaluate each expression. Show all work!!

a. $18 \div 2 + 24 \div 6$

b. $(3x)^2 - 7y^2$ when $x = 3$ and $y = -2$

c. $-3 - 2 \cdot 4 + 18 \div 2$

d. $m + (p - 2)^2$ when $m = 3$ and $p = -4$

e. $-9 + 12 \div 3 - 1$

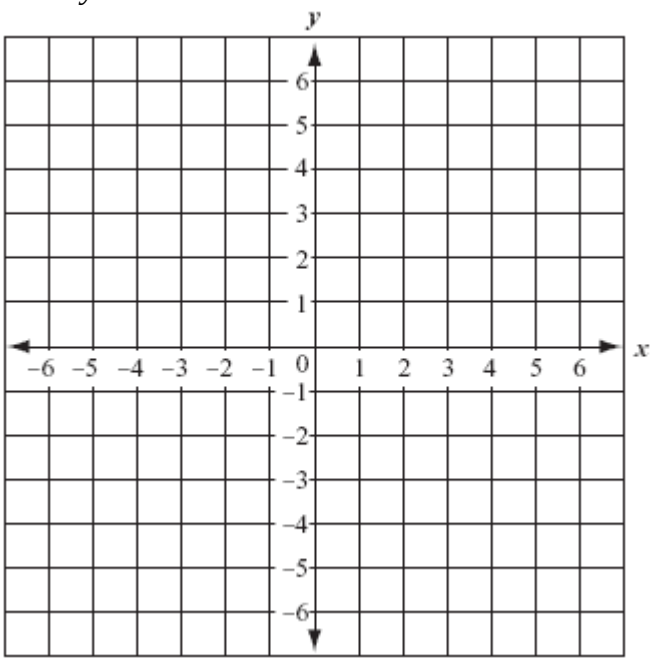
f. $\dfrac{10x}{2y - 3}$ when $x = -3$ and $y = -6$

g. $24 - (1 + 1)^4 \div 4$

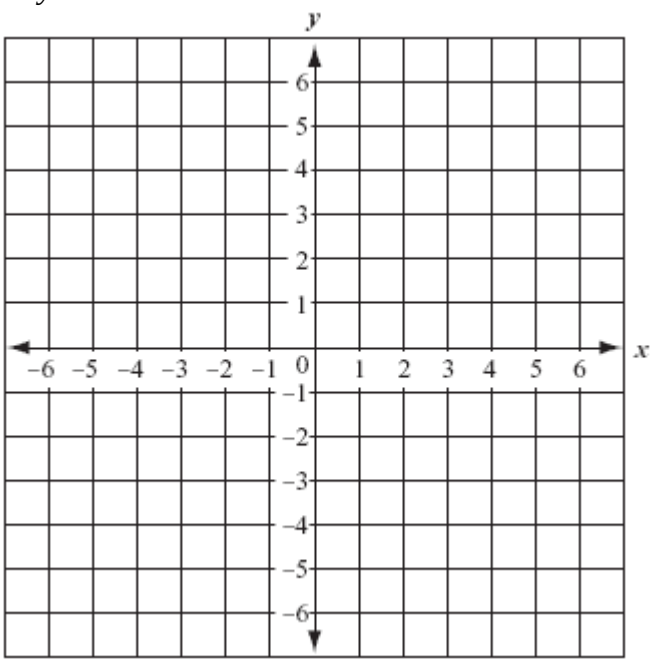
h. $(a - y)^2 + 2y^2$ when $a = 2$ and $y = -3$

2. Solve the following systems by <u>GRAPHING</u>.

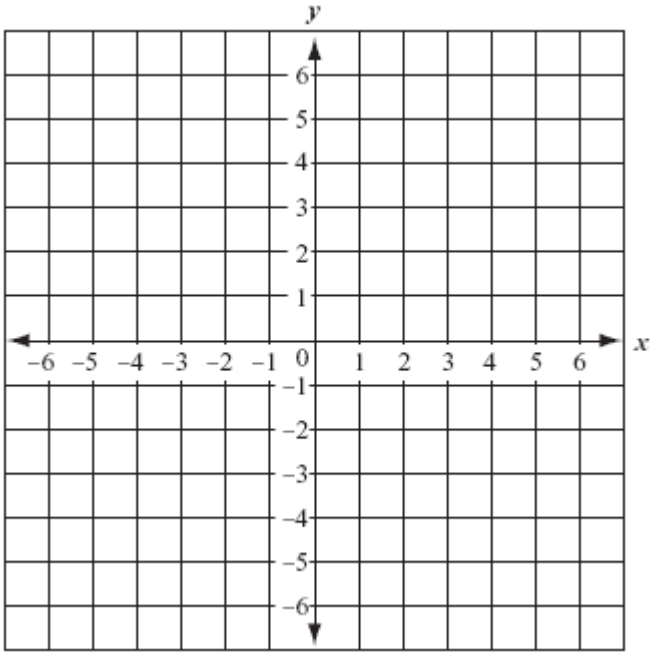
a. $y = 3x + 1$
$3y = 9x - 3$



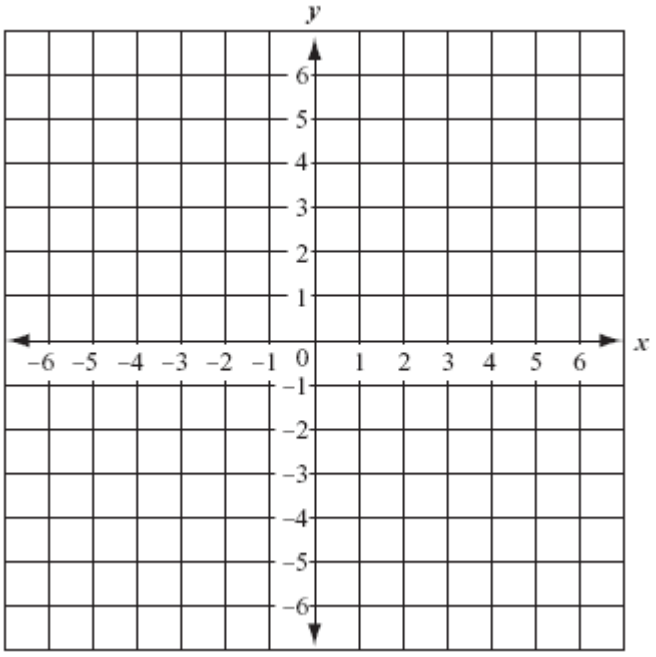
b. $x + y = 3$
$-2x + y = -6$



c. $x - y = 5$
$x + 2y = -4$



d. $-2x - 3y = 9$
$4x + 6y = -18$



Algebra 2 **Name**_____
Practice B **Date**_____ **Block**____

1. Simplify each expression. Answers should be written using positive exponents.

a. $a^6 \cdot a^3$

b. $3x^5 \cdot 4x^6$

c. $\left(4a^2b^3\right)^5$

d. $\dfrac{x^{11}y^{10}}{x^{-3}y^{-1}}$

e. $-3x^{-4}y^0$

f. $\left(\dfrac{y}{2}\right)^3$

g. $(x^{-5}y^{-2})^{-1}$

h. $(2x^2y^4)^2 3x^5$

i. $\dfrac{1}{y^{-3}}$

2. Solve the following system by <u>ELIMINATION</u>.

$3x + 2y = 6$
$-6x - 3y = -6$

3. Solve the following system by <u>ELIMINATION</u>.

$9x + 6y = -9$
$-6x - 4y = 6$

Algebra 2 **Name**_____

Practice C **Date**_____ **Block**_____

Express the following in simplest radical form. No decimals!

1. $\sqrt{90}$

2. $2\sqrt{28}$

3. $\sqrt{\frac{12}{49}}$

4. $\sqrt{27xy^5}$

Solve each equation for the indicated variable. Show all work!

5. $2(x + 1) = 4 - 3(2x + 1)$

6. $\frac{2}{3}x - 18 = \frac{x}{6}$

7. $5(4 - x) = -4x + 20 - x$

8. $100 = 4x^2$

Algebra 2 **Name**_____
Practice D **Date**_____ **Block**____

Factoring Polynomials

Factor *completely.*

1. $x^2 - 7x + 10$
2. $2x^2 - 7x + 3$
3. $18x^2 - 2$
4. $x^2 - 12x + 36$
5. $3x^2 - 17x + 10$
6. $25 - x^2$

Linear Equations in Two Variables

Write an equation, in slope-intercept form, using the given information.

7. (0, 3), $m = \frac{2}{3}$
8. (1, -2), $m = -3$
9. (9, 1), $m = 0$
10. (4, 3), (-2, 7)