

Name \_\_\_\_\_  
Date \_\_\_\_\_

MTH 098 – Introduction to Algebra  
Class # 15 HW

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***Review Class***

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Quality – Accuracy – Transfer – 100%

**Section 1.** Evaluate.

1.  $\frac{-2ab}{a^2 - 2ac}$  when  $a = 2$ ,  $b = -2$ , and  $c = -3$

2.  $-2ac - 3(a + b)^2$  when  $a = 1$ ,  $b = 3$ , and  $c = -4$

3.  $-a^2 - 2ac \div (-b)$  when  $a = 6$ ,  $b = -3$ , and  $c = 4$

**Section 2.** Solve the Equations for the Variable.

4.  $3a + 5 = 5a + 7$

5.  $3x - 7 = 4 - 2(3x + 4)$

6.  $2(3 - 4x) + 4 = 2 - 3(4 - 4x)$

7.  $\frac{2}{3}x + 5 = 3$

**Formula Problems: Solving Multi-Variable Expressions for the “Asked For” Variable.**

8. Solve for  $a$ :  $5a + 3b = 10$

9. Solve for  $y$ :  $-x + 2y = 4$

**Section 3. Simplify, Leaving Positive Exponents in the Answer.**

10.  $(x^3y^4)^2$

11.  $(3a^{-1}b^2)^{-2}$

12.  $(2x^{-3})(x^4y^{-1})^2$

13.  $\frac{-36a^3b}{-12a^2b}$

14.  $-\frac{35a^3b^6}{7ab^4}$

15.  $\frac{80a^8b^{11}}{16a^{10}b^9}$

**Section 4. Solve the system of Linear Equations Algebraically.  
(Use Either Substitution or Addition).**

99. 
$$\begin{aligned} 3x - 2y &= -3 \\ x + 5y &= -18 \end{aligned}$$

100. 
$$\begin{aligned} 5x + 5y &= 5 \\ y &= 3 - x \end{aligned}$$

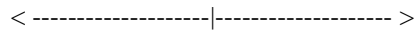
101. 
$$\begin{aligned} 3x - 5y &= -11 \\ 2x + 2y &= 14 \end{aligned}$$

102. 
$$\begin{aligned} 2x - 3y &= 14 \\ 4x - 6y &= 28 \end{aligned}$$

Section 5. Solve and Graph the Inequalities. Perform All Point Tests.

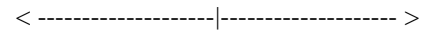
1. Solve and Graph the Inequality.

$$x + 2 \leq 5$$



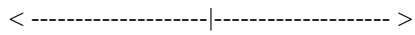
2. Solve and Graph the Inequality.

$$-4y \geq 16$$



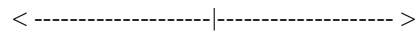
1. Solve and Graph the Inequality.

$$2x + 3 < 5x - 6$$



2. Solve and Graph the Inequality.

$$11 - 4x > 19$$



**Work Area:**