MPM2D Review Day 1 Name:\_\_\_\_\_\_\_\_\_\_\_\_

**Evaluating Expressions and Solving Equations**

1. Write each expression as a single power, then evaluate:

 a)  b) 

 c)  d) 

2. Expand and simplify each of the following:

 a)  b) 

 c) 

3. Solve for the unknown variable:

 a)  b) 

 c)  d) 

4. Evaluate each expression where $a=-2.$

a)$ 8-5a$ b) $-a^{2}+a+2$ c) $\frac{3a-2}{a}$

5. Evaluate each expression where $c=-4 andd=-3$.

1. $-2cd$ b) $2c-2d$ c) $(c+3d)^{2}$

d) $2d^{2}-3c+5$ e) $\left(c-2\right)(8+d)$

6. Solve the following equations **algebraically.**Be sure to show all your work. Answers should be expressed as fractions in lowest terms, if necessary.

a)  b) 

c)  d) 

e) Verify your solution to question 6b. Show your work below.

## Evaluating Algebraic Expressions

1. Find the value of each expression if  and .

a) *a + b* b) *a – 2b* c) $\frac{1}{2}a-\frac{1}{3}b$

1. **Simplify**.

a) (2*x* – 5) + (8*x* + 13) b) (5*a* – 7*ab*) + (6*b* + 4*a*) – (9*ab* – 3*a* + 3*b*)

c) –2(4*x* + 5*y*) + 4(8*x* – 7*y*) d) –7(*x*2 + 6*x* + 9) - 5(2*x*2 - 3*x + 4*)

**Solving Equations**

1. **Solve**.

a) 3*y* + 5 = 11 b) 4*x* – 3 = -11 c) 17 = 4*c* – 3

d) 6*x* + 8 = 4*x* – 10 e) 9*p* – 10 = 6 + *p*  f) 2*m* + 6.1 = 16.5

g) $\frac{x}{2}=4$ h) $\frac{3x}{5}=-9$ i) $6=\frac{m}{4}$

j)$2\frac{x}{-7}=6$ k)$3=\frac{3}{2}x-3$ l) $\frac{1}{4}x-3=5$

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