

**MPM 2D**

**Review of Essential Skills #4: Simplifying Algebraic Expressions and Solving Equations**

**Instructions:** Complete the following questions. Be sure to show your work, and remember to use brackets when you are subbing a value into an expression so that you can minimize sign and operation issues!

1. Expand and simplify each of the following. Remember that you can only add/subtract like terms, and that you need to add exponents when you are multiplying variables of the same base (ex/  $(6y)(2y^2) = 12y^3$ ).

|  |  |
|--|--|
| a. $(4x - 5y) - (6x + 3y) - (7x + 2y)$ | b. $5x(x^2 - x + y)$                   |
| c. $3x(x + 2) + 5x(x - 2)$             | d. $2m^2n(m^3 - n) - 5m^2n(3m^3 + 4n)$ |

2. Solve each of the following equations by isolating the variable (use BEDMAS in reverse order- undo addition/subtraction, then multiplication/division!)

|                       |                                     |  |
|-----------------------|-------------------------------------|--|
| a. $6x - 8 = 4x + 10$ | b. $8(y - 1) = 4(y + 4)$            | c. $2x + 7.8 = 9.4$                    |
| d. $\frac{x}{5} = 8$  | e. $3y - \frac{1}{2} = \frac{2}{3}$ | f. $4 - \frac{m}{3} = 5 + \frac{m}{2}$ |

