HOMEWORK: MATH INTERLUDES II – REVERSING THE ORDER OF OPERATIONS

Directions: Remember – neatness and completeness count. Also, you must show your work. The correct result without a sufficient amount of correct and appropriate work is worth zero points. Finally, please remember to include this assignment in your Math Interludes Notebook.

- 1) To simplify an expression, should we apply the Order of Operations in *top-down* or *bottom-up* order?
- 2) To solve an equation (i.e. isolate the variable on one side of the equation), should we apply the Order of Operations in *top-down* or *bottom-up* order? Explain.
- 3) Explain why 8 3 = 8 + (-3).

4) According to the Order of Operations, we need to undo the addition first to solve the following equation. To undo the addition, some students would choose to add the opposite instead of subtracting. Explain why adding the opposite is helpful for the equation. Then solve the equation and begin by adding the opposite to undo the addition.

4x + (-5) = 7

5) Solve or simplify as directed.

a) Simplify:

$$4^3 + [3^2 - (10 \div 2)] - 7 \cdot 3$$
e) Solve: $6 - 4x = 18$

b) Solve:
$$-3 + 4x = 5$$
 f) Simplify: $128 \div 4^2 \cdot 2$

c) Simplify:
$$\frac{3^3 - \sqrt{9 + 16}}{15 - (16 - 3 \cdot 4)}$$
 g) Solve: $6 - \frac{2x}{3} = -3$

d) Solve:
$$-18 = 3(x - 2)$$
 h) Solve: $-9 - \frac{x}{4} = 1$

Math Interludes II Homework:

ath Interludes II Homework:											
1)	Top-down 2) Bottom-up. To isolate the variable on one side of							3)	Subtraction is add the		
			the equation	, we n	eed to "undo"	' the o	perations.		opposite.		
4)	-5 + 5 = 0	addin	g 5 undoes	5a)	47	5b)	x = 2	5c)	2	5d)	x = -4
	adding –5)										
5e)	x = -3	5f)	16	5g)	x = 13.5	5h)	x = -40				