Algebra 2
1st Quarter: Skills Review # 2

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Name _____
Date _____ Block _____

Solving Equations Review:

Steps:

1. Eliminate parentheses (Distribute)
2. Combine like terms (on the same side)
3. Use addition or subtraction to get the variables on the same side of the equal sign
4. Undo addition or subtraction
5. Undo multiplication or division

Example:

Solve: 4x + 5 (7x – 3) = 9 (x – 5)

4x + 35x – 15 = 9x – 45

39x – 15 = 9x – 45

30x – 15 = - 45

30x = - 30

x = - 1

Directions: Solve each equation. NO WORK = NO CREDIT!!!

1) p – 1 = 5p + 3p – 8	2) -18 – 6k = 6(1 + 3k)
3) 2(4x – 3) – 8 = 4 + 2x	4) 24a – 22 = -4(1 – 6a)
5) -3(4x + 3) + 4(6x + 1) = 43	Answers to # 1 – 5: 1. p = 1 2. k = - 1 3. x = 3 4. No Solution 5. x = 4

Solving Inequalities Review:

The steps are the same as solving equations EXCEPT…you MUST switch inequality symbol when solving if you multiply or divide by a negative number

Example when you Switch symbol	Example when you do NOT Switch symbol
Solve: $-3x < 9$ $x > -3$ (divided by NEGATIVE 3)	Solve: $3x < -12$ $x < -4$ (divided by POSITIVE 3)

Directions: Solve the inequality. NO WORK = NO CREDIT!!!

1) $3x + 12 < 9$	2) $4x - 3 \geq 6x + 15$
3) $5 + 11(2 - m) > m - 9$	4) $7t + 15 \leq 13t - 9$
5) $2x - 5(x - 4) \geq 8 + x$	Answers to # 1 – 5: 1. $x < -1$ 2. $x \leq -9$ 3. $m < 3$ 4. $t \geq 4$ 5. $x \leq 3$