Name _____ Date ___/___/___

Lesson – Inequalities **(1.5 - 2 DAY assignment)**

Think about what each answer means now that the equal sign has been changed to an inequality symbol. Draw a number line to represent your answer.

A.5B (1A and 1F) **Day 1**

1. $6(5x-2) > 78$

A.5B (1A and 1F) **Day 1**

2. $-5(r+8) \geq -89$

A.5B (1A and 1F) **End of Day 1 or Day 2**

3. $8n-(3n+4) < 36$

A.5B (1A and 1F) **Day 1**

4. $2x + -4x - 5 \leq 7$

A.5B (1A and 1F) **Day 2**

5. $5.8 - 0.32x \leq -1.48$

A.5B (1A and 1F) **Day 2**

6. $\frac{b}{6} + \frac{1}{5} > 19$

$-\frac{b+1}{6} > 19$

IMPORTANT: Equations have _____ solution but inequalities have ____ solutions.

Name _____ Date ___/___/___

Classwork – Inequalities

Work each problem in the designated box and check your answers using the second column.

| | | |
|---|---|---|
| 1. $\frac{x}{2}+\frac{5}{6}<\frac{11}{6}$ | | x ≥ 10 |
| 2. -3x + 5 – 2x ≤ 35 | | x < 2 |
| 3. 4x + 1 > -9 + 6x | | x ≥ -6 |
| 4. -4(x - 7) < -9x – 17 | | x < -3 |
| 5. 10 + 6x ≤ -20 | | x = 0 |
| 6. 2x – 2 – x = -2 | | x > -7 |
| 7. $\frac{36+4x}{2} = 24$ | | x < 5 |
| 8. 4 + 3x > 7x – 40 | | x < 9 |
| 9. $-\frac{x}{3}+\frac{8}{9} \leq \frac{11}{9}$ | | x < 11 |
| 10. -4(x -9) ≤ -18 + 5x | | x > 9 |
| 11. 21 + 7(x – 5) ≤ 35 | | x < 4 |
| 12. -7x – 4 > 17 | | x ≤ -1 |
| 13. 3x + 6 + x > -22 | | x ≤ -5 |
| 14. 5 + 6x > -19 | | x ≥ -2 |
| 15. $-\frac{6x+10}{2} > -32$ | | x > -4 |
| 16. -7 + 6x – x < 13 | | x = 3 |
| 17. 2 – (-18x – 16) ≥ -18 | | x ≤ -10 |
| 18. 3(x + 2) ≥ -3(2x – 32) | | x ≤ 7 |
| 19. -14 ≤ 0.1x +1.4x – 10.5 | | x > 5 |
| 20. 14 – (7x + 49) ≥ 35 | | x ≤ 3 |

| | | |
|---|---|---|
| 5 | 12 | 14 |
| 1 | 9 | 2 |
| 7 | 15 | 6 |

| | | |
|---|---|---|
| 13 | 16 | 17 |
| 11 | 19 | 4 |
| 8 | 3 | 10 |

Put 18 and 20 on a separate piece of paper!

KEY

| | | |
|---|---|---|
| 21. $\frac{x}{2}+\frac{5}{6}<\frac{11}{6}$ | | x ≥ 10 **(18)** |
| 22. -3x + 5 – 2x ≤ 35 | | x < 2 **(1)** |
| 23. 4x + 1 > -9 + 6x | | x ≥ -6 **(2)** |
| 24. -4(x - 7) < -9x – 17 | | x < -3 **(12)** |
| 25. 10 + 6x ≤ -20 | | x = 0 **(6)** |
| 26. 2x – 2 – x = -2 | | x > -7 **(13)** |
| 27. $\frac{36+4x}{2}=24$ | | x < 5 **(3)** |
| 28. 4 + 3x > 7x – 40 | | x < 9 **(4)** |
| 29. $-\frac{x}{3}+\frac{8}{9}\leq\frac{11}{9}$ | | x < 11 **(8)** |
| 30. -4(x -9) ≤ -18 + 5x | | x > 9 **(15)** |
| 31. 21 + 7(x – 5) ≤ 35 | | x < 4 **(16)** |
| 32. -7x – 4 > 17 | | x ≤ -1 **(9)** |
| 33. 3x + 6 + x > -22 | | x ≤ -5 **(5)** |
| 34. 5 + 6x > -19 | | x ≥ -2 **(17)** |
| 35. $-\frac{6x+10}{2}>-32$ | | x > -4 **(14)** |
| 36. -7 + 6x – x < 13 | | x = 3 **(7)** |
| 37. 2 – (-18x – 16) ≥ -18 | | x ≤ -10 **(20)** |
| 38. 3(x + 2) ≥ -3(2x – 32) | | x ≤ 7 **(11)** |
| 39. -14 ≤ 0.1x +1.4x – 10.5 | | x > 5 **(10)** |
| 40. 14 – (7x + 49) ≥ 35 | | x ≤ 3 **(19)** |