Found of Alg

Lesson: Solving Linear Inequalities – part 1

Name: _____

Date _____

❖ Part 1 --- Graphing Inequalities

- Inequality: Any mathematical _____ that contains the symbols _____, _____, _____, or _____.

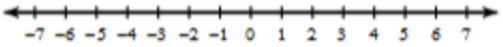
  - _____ greater than
  - _____ less than
  - _____ less than or equal to
  - _____ greater than or equal to

- Graphing Inequalities on a Number Line:

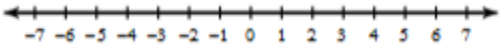
  - Shade the _____ that make the inequality _____
    - _____ circle to represent **>** or **<**
    - _____ or _____ circle to represent **≥** or **≤**

  - **Shade the graph for each inequality**.

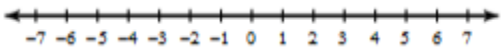
1. $n > 0$



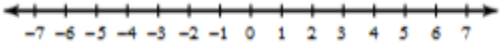
2. $k \leq 1$



3. $x \geq -2$

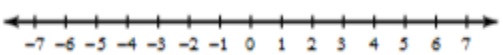


4. $n < -6$



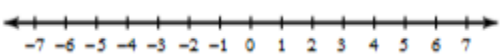
5. $3 < x$

_____

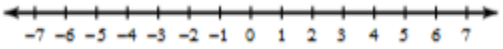


6. $-4 \geq k$

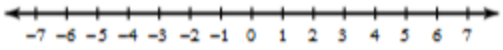
_____



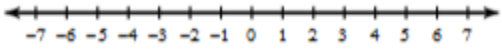
7. $0 < x < 5$



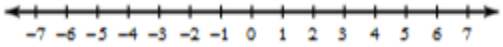
8. $-3 \leq k < 2$



9. $n < 1 \ or \ n \geq 6$

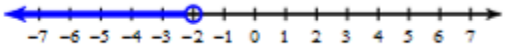


10. $n < -4 \ or \ n > 0$

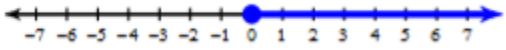


- **Write an inequality for each graph.**

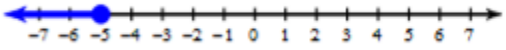
11. _____



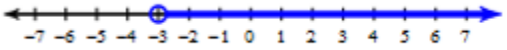
12. _____



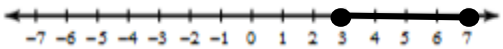
13. _____



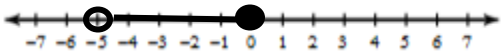
14. _____



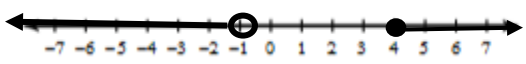
15. _____



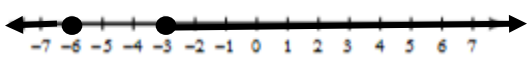
16. _____



17. _____



18. _____

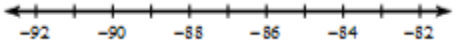


❖ Part 2 --- Solving Inequalities

- Solve like an _____
  - Switch sides of the inequality and the symbol if the variable is on the _____
  - If you _____ or _____ by a _____ number, switch the inequality symbol's _____
- **Solve and graph the inequality.**

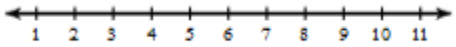
19. $\frac{x}{12} \geq -7$

_____



20. $n - 8 \geq -4$

_____



21. $-15 + v \geq -13$

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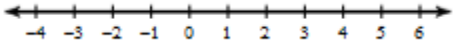
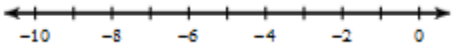


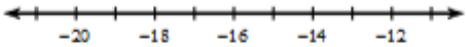
22. $9x < -18$

_____



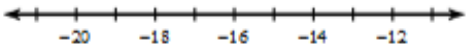
23. $-19r \geq 361$

_____



24. $6a > -66$

_____



25. $-\frac{x}{3} \geq 2$

_____

26. $x - 12 > 3$

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