

Algebra 22
Worksheet 6.1
Solving inequalities

Name: _____

Please Read Page 356 in Your Online Text Book Before Attempting the Problems Below and On The Next Page.

TRANSLATE EACH STATEMENT INTO SYMBOLS.

- | | |
|---|--|
| 1. 4 is greater than -7 . | 2. -5 is less than -3 . |
| 3. -12 is less than or equal to -9 . | 4. 6 is greater than or equal to 2. |
| 5. 3 is greater than 2 and less than 3.5. | 6. 0 is greater than $-\frac{1}{2}$ and less than 1. |
| 7. -8 is between 0 and -10 . | 8. 5 is between -9 and 9. |
| 9. 4.6 is greater than 4 and 4 is greater than 0. | 10. -1.5 is less than -1 and -1 is less than 2 |
| 11. The number n is greater than 10. | 12. The number n is less than 20. |

CLASSIFY EACH AS TRUE OR FALSE.

- | | |
|-------------------|--------------------|
| 13. $-6 < 1 < 7$ | 14. $6 > 0 > 2$ |
| 15. $-5 < -4 < 4$ | 16. $-3 > -2 > -1$ |

Graph all the solutions to each inequality.

16. $x > 5$		17. $c < -2$	
18. $d \leq 6$		19. $3 > k$	
20. $n \geq 12$		21. $-3 < p$	
22. $-2 > w$		23. $6 \geq t$	
24. $h \geq -12$		25. $-5 < v$	
26. $x < 7$		27. $0 > y$	

Solve each inequality

32. $12 \geq g - 1$ _____	33. $f + 38 < 17$ _____
34. $h - 3 < -3$ _____	35. $t - 10 \leq 19$ _____
36. $y + 8 < -12$ _____	37. $4 + q > 13$ _____
38. $-7 + t > -8$ _____	39. $20 \leq x + 21$ _____
40. $h + 5 < 3$ _____	41. $v - 12 \geq 4$ _____

Write an inequality that describes the set of points on each number line.

20.	_____
21.	_____
22.	_____
23.	_____
24.	_____

Now that you're done - check your answers with another pair of students. Discuss any discrepancies in your answers and make corrections.