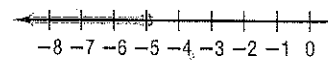
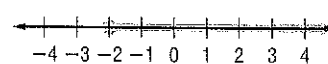
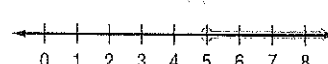
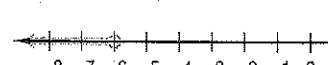



6-1 Skills Practice

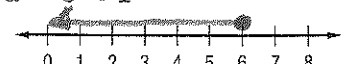
Solving Inequalities by Addition and Subtraction

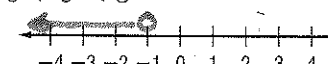
Match each inequality with its corresponding graph.

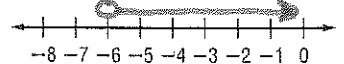
1. $x + 11 > 16$ *c*
2. $x - 6 < 1$ *e*
3. $x + 2 \leq -3$ *a*
4. $x + 3 \geq 1$ *b*
5. $x - 1 < -7$ *d*

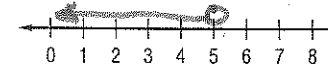
- a. 
- b. 
- c. 
- d. 
- e. 

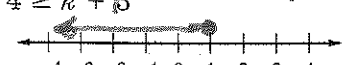
Solve each inequality. Then check your solution, and graph it on a number line.


6. $d - 5 \leq 1$ *d ≤ 6*


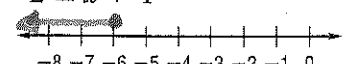
7. $s + 9 < 8$ *s < -1*


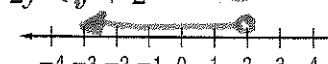
8. $a - 7 > -13$ *a > -6*


9. $w - 1 < 4$ *w < 5*


10. $4 \geq k + 8$ *1 ≥ k or k ≤ 1*


11. $-9 \leq b - 4$ *-5 ≤ b or b ≥ -5*


12. $-2 \geq x + 4$ *-6 ≥ x or x ≤ -6*


13. $2y < y + 2$ *y < 2*


Define a variable, write an inequality, and solve each problem.

14. A number decreased by 10 is greater than -5. *n - 10 > -5* *n > 5*
15. A number increased by 1 is less than 9. *n + 1 < 9* *n < 8*
16. Seven more than a number is less than or equal to -18. *n + 7 ≤ -18* *n ≤ -25*
17. Twenty less than a number is at least 15. *n - 20 ≥ 15* *n ≥ 35*
18. A number plus 2 is at most 1. *n + 2 ≤ 1* *n ≤ -1*

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6-2 Skills Practice

Solving Inequalities by Multiplication and Division

Match each inequality with its corresponding statement.

- | | |
|-----------------------------------|---|
| 1. $3n < 9$ d | a. Three times a number is <u>at most</u> nine. $3n \leq 9$ |
| 2. $\frac{1}{3}n \geq 9$ f | b. One third of a number is <u>no more than</u> nine. $\frac{1}{3}n \leq 9$ |
| 3. $3n \leq 9$ a | c. Negative three times a number is <u>more than</u> nine. $-3n > 9$ |
| 4. $-3n > 9$ c | d. Three times a number is <u>less than</u> nine. $3n < 9$ |
| 5. $\frac{1}{3}n \leq 9$ b | e. Negative three times a number is <u>at least</u> nine. $-3n \geq 9$ |
| 6. $-3n \geq 9$ e | f. One third of a number is <u>greater than or equal to</u> nine. $\frac{1}{3}n \geq 9$ |

Solve each inequality.

- | | | | |
|--|---------------------------------------|--|--|
| 7. $14g > 56$
$g > 4$ | 8. $11w \leq 77$
$w \leq 7$ | 9. $20b \geq -120$
$b \geq -6$ | 10. $-8r < 16$
$r > -2$ |
| 11. $-15p \leq -90$
$p \geq 6$ | 12. $\frac{s}{4} < 9$ (4)
$s < 36$ | 13. $\frac{a}{9} \geq -15$ (9)
$a \geq -135$ | 14. $-\frac{p}{7} > -9$ (-7)
$p < 63$ |
| 15. $-\frac{t}{12} \geq 6$ (-12)
$t \leq -72$ | 16. $5z < -90$
$z < -18$ | 17. $-13m > -26$
$m < 2$ | 18. $\frac{k}{5} \leq -17$ (5)
$k \leq -85$ |
| 19. $-y < 36$
$y > -36$ | 20. $-16c \geq -224$
$c \leq 14$ | 21. $-\frac{h}{10} \leq 2$ (-10)
$h \geq -20$ | 22. $12 > \frac{d}{12}$ (12)
$144 > d$ |

Define a variable, write an inequality, and solve each problem.

23. Four times a number is greater than -48. $4n > -48$ $n > -12$
24. One eighth of a number is less than or equal to 3. $\frac{1}{8}n \leq 3$ (8) $n \leq 24$
25. Negative twelve times a number is no more than 84. $-12n \leq 84$ $n \geq -7$
26. Negative one sixth of a number is less than -9. $-\frac{1}{6}n < -9$ (-6) $n > 54$
27. Eight times a number is at least 16. $8n \geq 16$ $n \geq 2$

Lesson 6-2

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