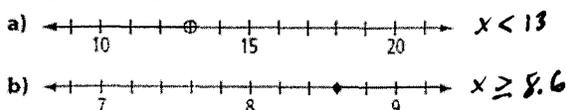


Test #7 (Inequalities & Equations) Extra Practice 2

1. An Internet business is preparing a flyer to advertise a sale. Express each statement as an inequality.

- a) Savings of up to 40%! $S \leq 40$
 b) Free shipping for purchases of \$500 or more! $f \geq 500$
 c) Over 80 major items on sale! $S > 80$

2. Verbally and algebraically express the inequality represented on each number line.



3. Sketch a number line to represent each inequality.

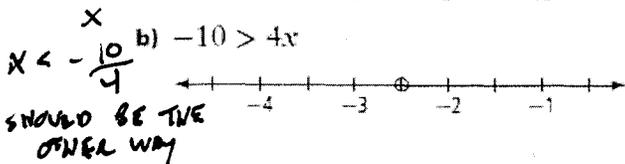
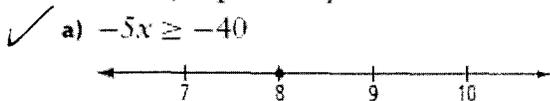
- a) $r > -4$ b) $s \leq 7$
 c) $9.5 > t$ d) $v \leq -\frac{5}{4}$

4. For each inequality in #3 state a value which is possible and a value which is not possible.

4.5 Solve each inequality.

$d > -3$ a) $d - 7 > -10$ $a > 5.4$ b) $2.7 < a - 2.7$
 $b \leq -33$ c) $-11 \geq \frac{b}{3}$ $c < -16$ d) $-\frac{1}{5}c > 3.2$

5. Verify that the solution shown on each number line is correct. If a number line is incorrect, explain why.



6. Tim earns \$14.50/h working for his parents' business during the summer. His goal is to earn at least \$600 each week. How many hours will Tim need to work each week to achieve his goal?

- a) Write an inequality to model the problem.
 b) Solve the inequality and interpret the solution.

a) $14.5t \geq 600$
 b) $t \geq 41.4$
 c) TIM MUST WORK AT LEAST 41.4 HOURS

7. Solve each inequality and verify the solution.

a) $\frac{x}{3} - 5 < 10$ $x < 45$
 b) $9x + 30 > 13x$ $7.5 > x$
 c) $3x \leq 8x + 5$ $x \geq -1$
 d) $5x + 8 < 4x - 12$ $x < -20$
 e) $17 - 3x \leq 7x + 3$ $1.4 < x$
 f) $2(3x + 4) > 5(6x + 7)$ $x < -\frac{9}{8}$

8. A student committee is planning a sports banquet. The cost of the dinner is \$450 plus \$24 per person. The committee needs to keep the total costs for the dinner under \$2000. How many people can attend the banquet? MAX 61

9. Lorna took three of her friends to visit the zoo. The bus fares cost \$5.50 per person. The cost of admission to the zoo was the same for each person in the group. Lorna spent \$109 altogether on fares and admission. What was the cost of each admission? \$21.75

10. Solve each equation. Verify the solution.

A $\frac{y}{4} + 1 = \frac{1}{2}$ $y = -2$
 B $\frac{7}{8} - \frac{1}{y} = 1\frac{3}{8}$ $y = -2$
 C $\frac{2y - 1}{4} = \frac{5y - 4}{8}$ $y = 2$
 D $\frac{2}{3}y + \frac{3}{2} = -\frac{1}{12}y$ $y = -2$

11. Nav is working part time. She pays a monthly fee of \$5.95 for her bank account, plus \$0.75 for each deposit or withdrawal. One month, the total cost of her account was \$12.70. How many deposits or withdrawals did she make that month?

9 TRANSACTIONS THIS MONTH