Name: KEY Class: _____ Date: _____ ID: A

Algebra 1 Chapter 4B Practice Test

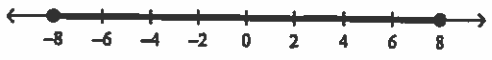
Multiple Choice

Identify the choice that best completes the statement or answers the question.

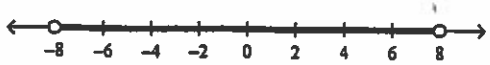
Write a compound inequality that represents each situation. Graph your solution.

C 1. all real numbers that are greater than –8 and less than 8 $-8 < x < 8$

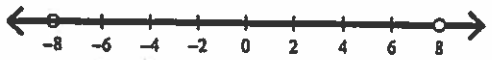
a. $-8 \le x \le 8$



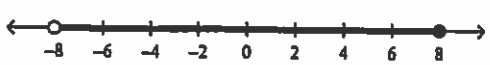
c. $-8 < x < 8$



b. $-8 < x < 8$



d. $-8 < x \le 8$



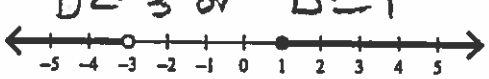
Write an inequality for the situation. $m < -1$ or $m > 19$

A 2. all real numbers m that are less than –1 or greater than 19

a. $m < -1$ or $m > 19$
c. $-1 < m < 19$
b. $m < 19$ or $m > -1$
d. $m < -1$ or $m \ge 19$

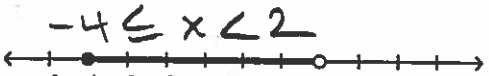
Write a compound inequality that the graph could represent.

D 3. $b < -3$ or $b \ge 1$



a. $b < -1$ or $b \ge 3$
c. $-1 \le b < 3$
b. $b > -3$ or $b \le 1$
d. $b < -3$ or $b \ge 1$

D 4. $-4 \le x < 2$



a. $-2 \le x < 4$
c. $x \ge -4$ or $x < 2$
b. $-4 < x \le 2$
d. $-4 \le x < 2$

Short Answer

5. Tina can type at least 45 words per minute. Write an inequality to model this situation.

Solve the inequality. $T \ge 45$

6. $7(a-2) > 42$

$7a - 14 > 42$
$+14 \quad +14$
$\frac{7a}{7} > \frac{56}{7}$
$a > 8$

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7. $-3x - 7 < 20$

$+7 \quad +7$

$\frac{-3x}{-3} < \frac{27}{3}$

$x > -9$

8. $j + 10 - 2(j - 24) \geq 0$

$1j + 10 - 2j + 48 \geq 0$

$-1j + 58 \geq 0$

$-58 \quad -58$

$\frac{-1j}{-1} \geq \frac{-58}{-1}$

$j \leq 58$

9. Solve for the variable. $10 + 17q \geq 12(q + 10)$

$10 + 17q \geq 12q + 120$

$-12q \quad -12q$

$\frac{10 + 5q}{5} \geq \frac{120}{5}$

$-10 \quad -10$

$5q \geq 110$

$q \geq 22$

10. Solve for the variable and graph your solution. $3(2x - 3) < 5(x + 2) + 3x + 1$

$6x - 9 < 5x + 10 + 3x + 1$

$6x - 9 < 8x + 11$

$-6x \quad -6x$

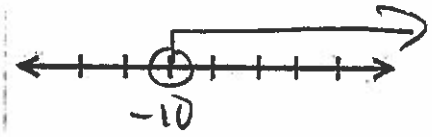
$-9 < 2x + 11$

$-11 \quad -11$

$\frac{-20}{2} < \frac{2x}{2}$

$-10 < x$

$x > -10$



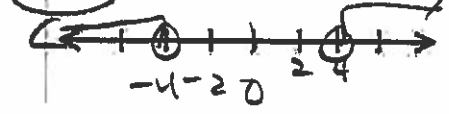
Solve the compound inequality. Graph your solution.

11. $2x - 4 < -12$ or $3x + 8 > 20$

$+4 \quad +4 \qquad -8 \quad -8$

$\frac{2x}{2} < \frac{-8}{2} \qquad \frac{3x}{3} > \frac{12}{3}$

$x < -4$ or $x > 4$



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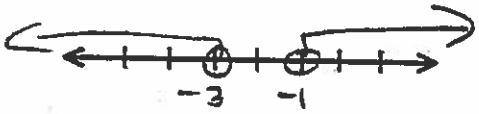
12. $4x - 7 < -19$ or $10x + 10 > 0$

$+7 \quad +7 \qquad -10 \quad -10$

$\frac{4x}{4} < \frac{-12}{4} \qquad \frac{10x}{10} > \frac{-10}{10}$

$x < -3$ or $x > -1$



Solve the inequality. then graph your solution.

13. $-2 \leq 2x - 4 < 2$

$+4 \quad +4 \quad +4$

$\frac{2}{2} \leq \frac{2x}{2} < \frac{6}{2}$

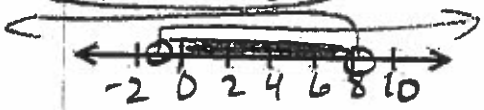
$1 \leq x < 3$

14. $-12 < 3x - 9 < 15$

$+9 \quad +9 \quad +9$

$\frac{-3}{3} < \frac{3x}{3} < \frac{24}{3}$

$-1 < x < 8$

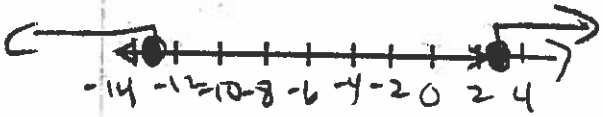


15. $|d + 5| \geq 8$

$d + 5 \geq 8 \qquad d + 5 \leq -8$

$-5 \quad -5 \qquad -5 \quad -5$

$d \geq 3$ OR $d \leq -13$



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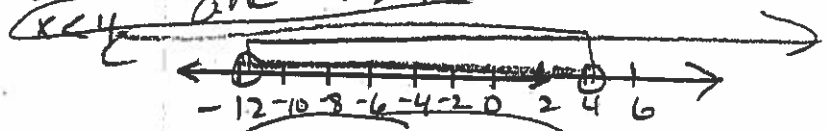
16. $|2x + 8| < 16$

$2x+8<16$ and $2x+8>-16$

$-8 \quad -8$ $\quad -8 \quad -8$

$2x<8$ $\quad 2x>-24$

$x<4$ and $x>-12$



$-12<x<4$

17. $|2x + 10| = 18$

$2x+10=18$ $\quad 2x+10=-18$

$-10 \quad -10$ $\quad -10 \quad -10$

$\frac{2x}{2}=\frac{8}{2}$ $\quad \frac{2x}{2}=\frac{-28}{2}$

$x=4$ $\quad x=-14$

Solve the equation. If there is no solution, write *no solution*.

18. $|x| - 5 = 10$

$+5 \quad +5$

$|x| = 15$

$x=15$ $\quad x=-15$

19. $2|n| - 10 = 24$

$+10 \quad +10$

$\frac{2|n|}{2}=\frac{34}{2}$

$|n| = 17$

$n=17$ $\quad n=-17$