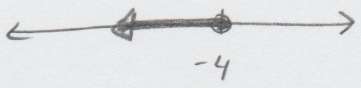
Key

Algebra 1 Chapter 3 Pre-Test

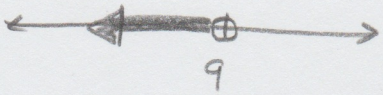
1.) (5 pts each, 10 pts total) (3-1) Graph each of the following inequalities.

a) $x \leq -4$



b) $9 > y$

$y < 9$

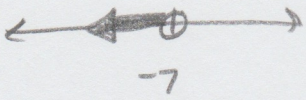


2.) (5 pts each, 15 pts total) (3-2) Solve each inequality. Graph and check the solution.

a) $f + 12 < 5$

$-12 \quad -12$

$f < -7$

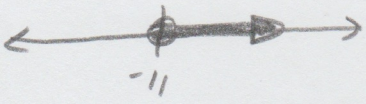


b) $-8 \leq t + 3$

$-3 \quad -3$

$-11 \leq t$

$t \geq -11$

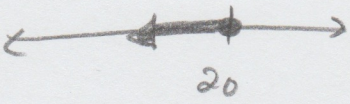


c) $7 \geq g - 13$

$+13 \quad +13$

$20 \geq g$

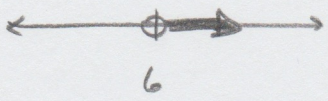
$g \leq 20$



3.) (5 pts each, 20 pts total) (3-3) Solve each inequality. Graph and check the solution.

a) $\frac{8n}{8} > \frac{48}{8}$

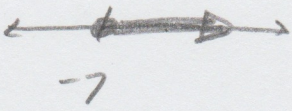
$n > 6$



b) $\frac{98}{-14} \geq \frac{-14d}{-14}$

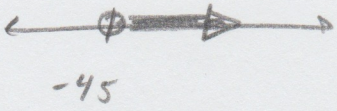
$-7 \leq d$

$d \geq -7$



c) $-3 \cdot \left(\frac{y}{-3}\right) < (15)(-3)$

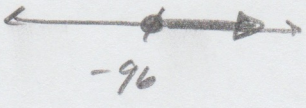
$y > -45$



d) $6 \cdot (-16) \leq \left(\frac{b}{6}\right)6$

$-96 \leq b$

$b \geq -96$

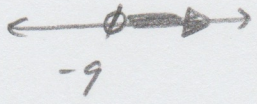


4.) (5 pts each, 20 pts total) (3-4) Solve each inequality. Graph and check the solution.

a) $13t - 8t > -45$

$\frac{5t}{5} > \frac{-45}{5}$

$t > -9$



b) $2(5t - 25) + 5t \leq -80$

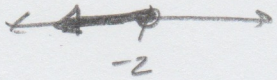
$10t - 50 + 5t \leq -80$

$15t - 50 \leq -80$

$+50 \quad +50$

$\frac{15t}{15} \leq \frac{-30}{15}$

$t \leq -2$

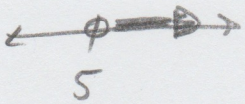


c) $-4p + 28 < 8$

$-28 \quad -28$

$\frac{-4p}{-4} < \frac{-20}{-4}$

$p > 5$



d) $3(4g - 6) \geq 6(g + 2)$

$12g - 18 \geq 6g + 12$

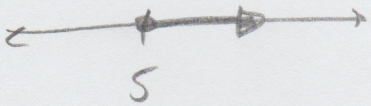
$-6g \quad -6g$

$6g - 18 \geq 12$

$+18 \quad +18$

$\frac{6g}{6} \geq \frac{30}{6}$

$g \geq 5$



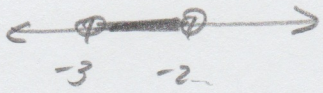
5.) (5 pts each, 20 pts total) (3-5) Solve each inequality. Graph and check the solution.

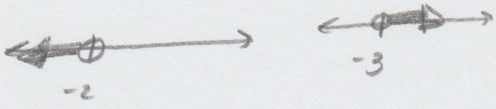
a) $-4d > 8$ and $2d > -6$

$\frac{-4d}{-4} > \frac{8}{-4}$ and $\frac{2d}{2} > \frac{-6}{2}$

"and" converges

$d < -2$ and $d > -3$





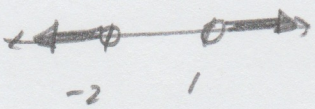
b) $7 + 2a > 9$ or $-4a > 8$

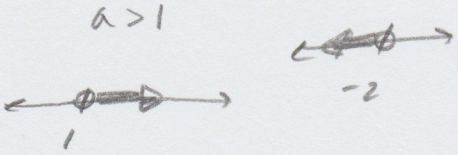
$-7 \quad -7 \quad \frac{-4a}{-4} > \frac{8}{-4}$

"or" diverges

$\frac{2a}{2} > \frac{2}{2}$ $\quad a < -2$

$a > 1$



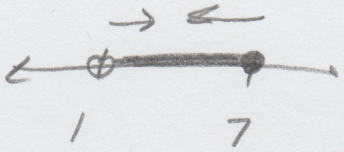


c) $-1 < h - 2 \leq 5$

$+2 \quad +2 \quad +2$

$1 < h \leq 7$

$h > 1$ $\quad h \leq 7$

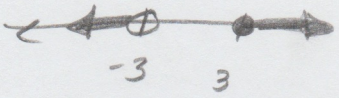


d) $t + 5 < 2$ or $3t + 1 \geq 10$

$-5 \quad -5 \quad -1 \quad -1$

$t < -3$ $\quad \frac{3t}{3} \geq \frac{9}{3}$

$t \geq 3$



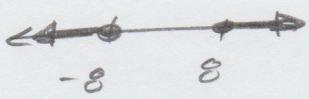
6.) (5 pts each, 10 pts total) (3-6) Solve each inequality. Graph and check the solution.

a) $|j| - 2 \geq 6$

$+2 \quad +2$

$|j| \geq 8$ that means

$j \geq 8$ or $j \leq -8$



b) $5 > |v + 2| + 3$

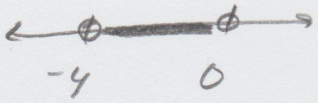
$-3 \quad -3$

$2 > |v+2|$ that means

$v + 2 < 2$ or $v + 2 > -2$

$-2 \quad -2 \quad -2 \quad -2$

$v < 0$ $v > -4$



7.) (5 pts each) (3-6) Solve the equation.

a) $|3c| - 45 = -18$

$+45 \quad +45$

$|3c| = 27$ that means

$\frac{3c}{3} = \frac{27}{3}$ and $\frac{3c}{3} = \frac{-27}{3}$

$c = 9$ $c = -9$

$c = \pm 9$