

Algebra 1

Practice Quiz 5.4-5.6

NAME _____

Solve each compound inequality and then on a number line which is provided on the right. (3 Points)

1. $a - 2 < 10$ and $a + 3 \geq 9$

$$\begin{array}{r} +2 \quad +2 \quad \quad -3 \quad -3 \\ a - 2 < 10 \quad \quad a + 3 \geq 9 \end{array}$$

$$a < 12 \quad a \geq 6$$

2. $b + 5 \geq 13$ or $b - 7 \leq -4$

$$\begin{array}{r} -5 \quad -5 \quad \quad +7 \quad +7 \\ b + 5 \geq 13 \quad \quad b - 7 \leq -4 \end{array}$$

$$b \geq 8 \quad b \leq 3$$

3. $2c + 9 \leq 17$ or $4c - 11 > 21$

$$\begin{array}{r} -9 \quad -9 \quad \quad +11 \quad +11 \\ 2c + 9 \leq 17 \quad \quad 4c - 11 > 21 \end{array}$$

$$\frac{2c}{2} \leq \frac{8}{2} \quad \frac{4c}{4} > \frac{32}{4}$$

$$c \leq 4 \quad c > 8$$

4. $3d + 15 > -6$ and $6d - 17 < 7$

$$\begin{array}{r} -15 \quad -15 \quad \quad +17 \quad +17 \\ 3d + 15 > -6 \quad \quad 6d - 17 < 7 \end{array}$$

$$\frac{3d}{3} > \frac{-21}{3} \quad \frac{6d}{6} < \frac{24}{6}$$

$$d > -7 \quad d < 4$$

5. $-15 \leq 2f - 9 \leq 11$

$$-15 \leq 2f - 9 \quad \text{and} \quad 2f - 9 \leq 11$$

$$\begin{array}{r} +9 \quad +9 \quad \quad +9 \quad +9 \\ -15 \leq 2f - 9 \quad \quad 2f - 9 \leq 11 \end{array}$$

$$\frac{-24}{2} \leq \frac{2f}{2} \quad \frac{2f}{2} \leq \frac{20}{2}$$

$$-12 \leq f \quad f \leq 10$$

7. $|h - 8| \geq 13$

$$h - 8 \geq 13 \quad \text{or} \quad h - 8 \leq -13$$

$$\begin{array}{r} +8 \quad +8 \quad \quad +8 \quad +8 \\ h - 8 \geq 13 \quad \quad h - 8 \leq -13 \end{array}$$

$$h \geq 21 \quad h \leq -5$$

6. $4g > 2g + 14$ or $6g < 2g + 12$

$$\begin{array}{r} -2g \quad -2g \quad \quad -2g \quad -2g \\ 4g > 2g + 14 \quad \quad 6g < 2g + 12 \end{array}$$

$$\frac{2g}{2} > \frac{14}{2} \quad \frac{4g}{4} < \frac{12}{4}$$

$$g > 7 \quad g < 3$$

8. $|3j + 12| < 9$

$$3j + 12 < 9 \quad \text{and} \quad 3j + 12 > -9$$

$$\begin{array}{r} -12 \quad -12 \quad \quad -12 \quad -12 \\ 3j + 12 < 9 \quad \quad 3j + 12 > -9 \end{array}$$

$$\frac{3j}{3} < \frac{-3}{3} \quad \frac{3j}{3} > \frac{-21}{3}$$

$$j < -1 \quad j > -7$$

9. $|5k + 10| \leq 15$

$$5k + 10 \leq 15 \quad \text{and} \quad 5k + 10 \geq -15$$

$$\begin{array}{r} -10 \quad -10 \quad \quad -10 \quad -10 \\ 5k + 10 \leq 15 \quad \quad 5k + 10 \geq -15 \end{array}$$

$$\frac{5k}{5} \leq \frac{5}{5} \quad \frac{5k}{5} \geq \frac{-25}{5}$$

$$k \leq 1 \quad k \geq -5$$

10. $|2m + 6| > 14$

$$2m + 6 > 14 \quad \text{or} \quad 2m + 6 < -14$$

$$\begin{array}{r} -6 \quad -6 \quad \quad -6 \quad -6 \\ 2m + 6 > 14 \quad \quad 2m + 6 < -14 \end{array}$$

$$\frac{2m}{2} > \frac{8}{2} \quad \frac{2m}{2} < \frac{-20}{2}$$

$$m > 4 \quad m < -10$$

1. _____



2. _____



3. _____



4. _____



5. _____



6. _____



7. _____



8. _____



9. _____



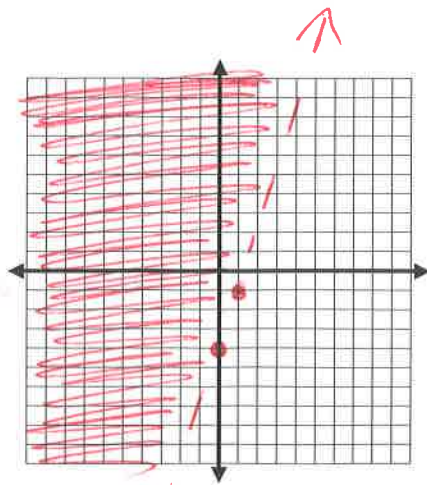
10. _____



Points (30) _____

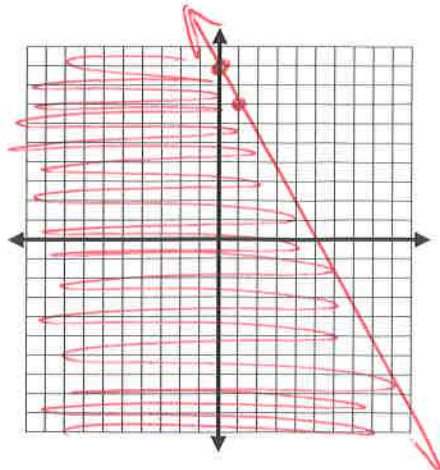
Graph each inequality. (3 Points)

11. $y > 3x - 4$



12. $2x + y \leq 9$

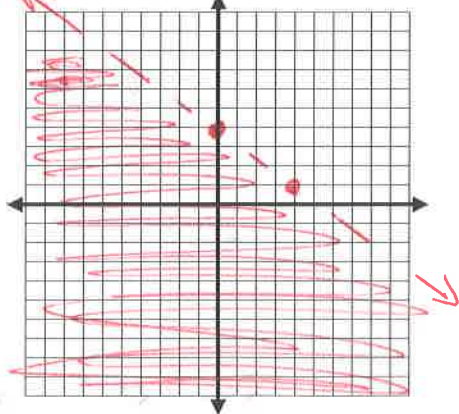
$y \leq -2x + 9$



13. $3x + 4y < 16$

$4y < -3x + 16$

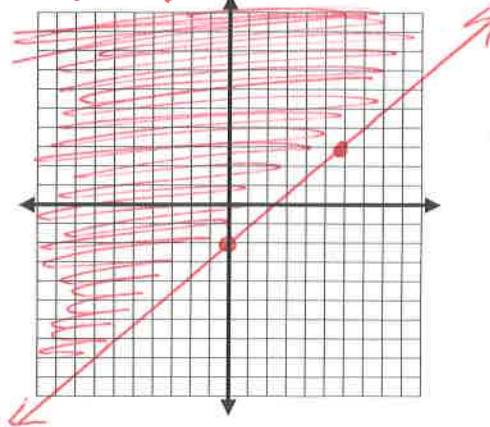
$y < -\frac{3}{4}x + 4$



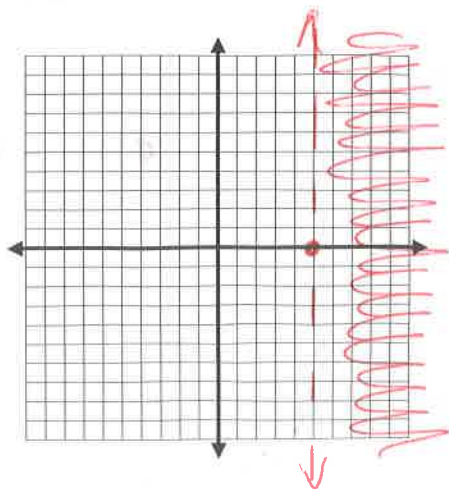
14. $6y - 5x \geq -12$

$6y \geq 5x - 12$

$y \geq \frac{5}{6}x - 2$



15. $x > 5$



16. $6x + 4y > 12$

$4y > -6x + 12$

$y > -\frac{3}{2}x + 3$

