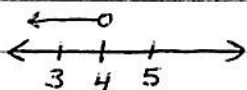


Extra Practice

1. $15x - 2 < 58$

$$15x < 60$$

$$x < 4$$



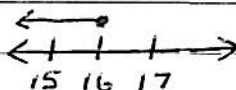
set builder: $\{x \in \mathbb{R} \mid x < 4\}$

interval notation: $(-\infty, 4)$

2. $4 - \frac{5}{8}x \geq -6$

$$-\frac{5}{8}x \geq -10$$

$$x \leq 16$$



set builder: $\{x \in \mathbb{R} \mid x \leq 16\}$

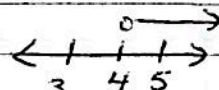
interval notation: $(-\infty, 16]$

3. $7x + 3 > 4x + 15$

$$3x + 3 > 15$$

$$3x > 12$$

$$x > 4$$



set builder: $\{x \in \mathbb{R} \mid x > 4\}$

interval notation: $(4, \infty)$

4. $14 - (9x - 2) \leq -x + 30$

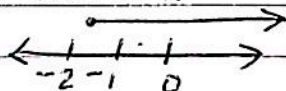
$$14 - 9x + 2 \leq -x + 30$$

$$16 - 9x \leq -x + 30$$

$$16 \leq 8x + 30$$

$$-14 \leq 8x$$

$$-1.75 \leq x$$



set builder: $\{x \in \mathbb{R} \mid x \geq -1.75\}$

interval notation: $[-1.75, \infty)$

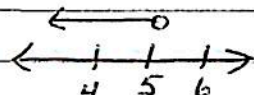
5. $8 - 3(4x - 1) > -49$

$$8 - 12x + 3 > -49$$

$$11 - 12x > -49$$

$$-12x > -60$$

$$x < 5$$

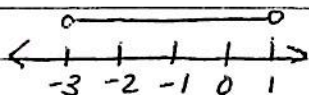


set builder: $\{x \in \mathbb{R} \mid x < 5\}$

interval notation: $(-\infty, 5)$

6. $2x > -6$ and $x - 1 < 0$

$$x > -3 \text{ and } x < 1$$

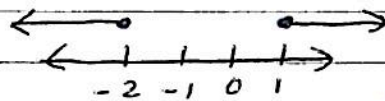


interval notation: $(-3, 1)$

7. $3x - 1 \leq -7$ or $4x + 9 \geq 13$

$$3x \leq -6 \text{ or } 4x \geq 4$$

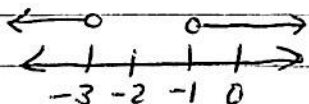
$$x \leq -2 \text{ or } x \geq 1$$



interval notation: $(-\infty, -2] \cup [1, \infty)$

8. $-5x > 15$ or $x - 5 > -6$

$$x < -3 \text{ or } x > -1$$



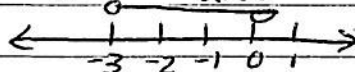
interval notation: $(-\infty, -3) \cup (-1, \infty)$

9. $8 < 8 - \frac{1}{3}x < 9$

$$8 < 8 - \frac{1}{3}x \text{ and } 8 - \frac{1}{3}x < 9$$

$$0 < -\frac{1}{3}x \text{ and } -\frac{1}{3}x < 1$$

$$0 > x \text{ and } x > -3$$



interval notation: $(-3, 0)$

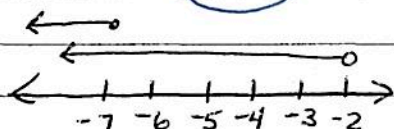
10. $4x+5 < x-1 \geq 2x+6$

$4x+5 < x-1$ and $x-1 \geq 2x+6$

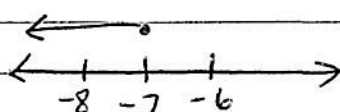
$3x+5 < -1$ $-1 \geq x+6$

$3x < -6$ $-7 \geq x$

$x < -2$ and $x \leq -7$



final copy



$(-\infty, -7]$

11. Let $x =$ number of chips

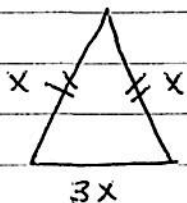
$380 + 12x \leq 600$

$12x \leq 220$

$x \leq 18.33$

Tonya can eat 18 chips

12.



Let $x =$ side of Δ

Let $3x =$ base of Δ

$x + x + 3x \leq 400$

$5x \leq 400$

$x \leq 80$

80 ft each side, 240 feet: base

13. Let $m =$ number of miles

Yellow Cab $<$ Green Cab

12 miles

$3 + .80(m-1) < 1(m)$

$3 + .80m - .80 < m$

$2.20 + .80m < m$

$2.20 < .2m$

$11 < m$