

A#28 p. 372 #2-28

Key

2. An inequality has no solutions if it always false. Ex. $3 > 4$

An inequality has all real #s as a solution if it always true. Ex. $0 \leq 8$

3. $2x - 3 > 7$ 4. $5y + 9 \leq 4$ 5. $8v - 3 \geq -11$ 6. $3(w + 12) < 0$

$2x > 10$

$5y \leq -5$

$8v \geq -8$

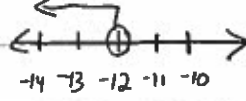
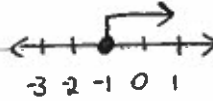
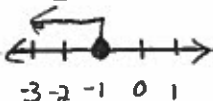
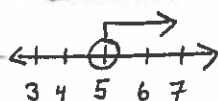
$w + 12 < 0$

$x > 5$

$y \leq -1$

$v \geq -1$

$w < -12$



7. $7(r - 3) \geq -13$ 8. $2(s + 4) \leq 16$ 9. $4 - 2m > 7 - 3m$ 10. $8n - 2 > 17n + 9$

$7r + (-21) \geq -13$

$s + 4 \leq 8$

$4 + m > 7$

$-9n + (-2) > 9$

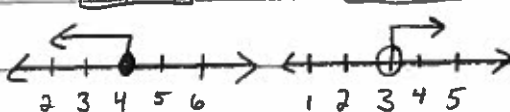
$7r \geq 8$

$s \leq 4$

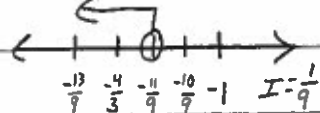
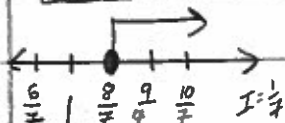
$m > 3$

$-9n > 11$ * by neg!

$r \geq \frac{8}{7}$



$n < -\frac{11}{9}$



11. $-10p > 6p - 8$ 12. $4 - \frac{1}{2}q \leq 33 - q$ 13. $-\frac{2}{3}d - 2 < \frac{1}{3}d + 8$

$-16p > -8$ * by neg!

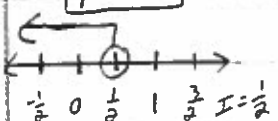
$4 + \frac{1}{2}q \leq 33$

$-d + (-2) < 8$

$p < \frac{1}{2}$

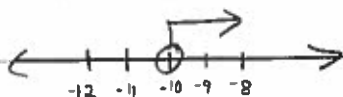
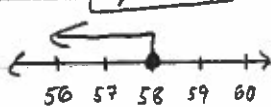
$\frac{1}{2}q \leq 29$

$-d < 10$



$q \leq 58$

$d > -10$



14. $8 - \frac{7}{3}f > -14 - 2f$ 15. Error! The inequality was not switched after

$8 + \frac{6}{3}f > -14$

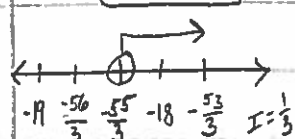
dividing by a negative number.

$\frac{6}{3}f > -22$

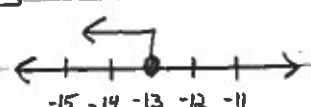
$17 - 3x \geq 56$

$f > -\frac{55}{3}$

$-3x \geq 39$



$x \leq -13$



A#28 continued

Key

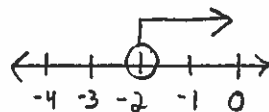
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16. The distributive property was not used correctly.

$$-4(2x-3) < 28$$

$$-8x + 12 < 28$$

$$-8x < 16$$

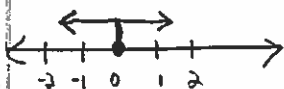


$$x > -2$$

17. $3p - 5 > 2p + p - 7$

$$-5 > -7 \text{ Always True}$$

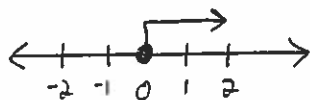
$$p = \{ \text{All real \#s} \}$$



18. $5d - 8d - 4 \leq -4 + 3d$

$$-6d \leq 0$$

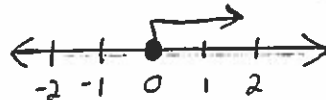
$$d \geq 0$$



19. $3(s-4) \geq 2(s-6)$

$$3s + (-12) \geq 2s + (-12)$$

$$s \geq 0$$

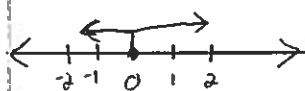


20. $2(x-3) > 2x-8$

$$2x + (-6) > 2x + (-8)$$

$$-6 > -8 \text{ Always True}$$

$$x = \{ \text{All real \#s} \}$$

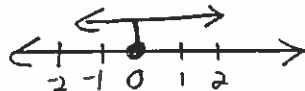


21. $5(b+9) \leq 5b + 45$

$$5b + 45 \leq 5b + 45$$

$$45 \leq 45 \text{ Always True}$$

$$b = \{ \text{All real \#s} \}$$

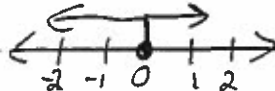


22. $2(4c-7) \geq 8(c-3)$

$$8c + (-14) \geq 8c + (-24)$$

$$-14 \geq -24 \text{ Always True}$$

$$c = \{ \text{All reals \#s} \}$$



23. $6(x+3) < 5x + 18 + x$

$$6x + 18 < 6x + 18$$

$$18 < 18 \text{ Always False}$$

$$\text{No Real Solution}$$

24. $4 + 9y - 3 \geq 3(3y + 2)$

$$9y + 1 \geq 9y + 6$$

$$1 \geq 6 \text{ Always False}$$

$$\text{No Real Solution}$$

25. $2.2h + 0.4 \leq 2(1.1h - 0.1)$

$$2.2h + 0.4 \leq 2.2h + (-0.2)$$

$$0.4 \leq -0.2 \text{ Always False}$$

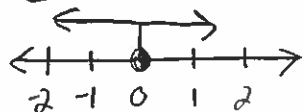
$$\text{No Real Solution}$$

26. $9.5j - 6 + 5.5j \geq 3(5j - 2)$

$$15j + (-6) \geq 15j + (-6)$$

$$-6 \geq -6 \text{ Always True}$$

$$j = \{ \text{All Real \#s} \}$$



27. $\frac{1}{5}(4m + 10) < \frac{4}{5}m + 2$

$$\frac{4}{5}m + 2 < \frac{4}{5}m + 2$$

$$2 < 2 \text{ Always False}$$

$$\text{No Real Solution}$$

28. $\frac{3}{4}(8n - 4) < -3(1 - 2n)$

$$6n + (-3) < -3 + 6n$$

$$-3 < -3 \text{ Always False}$$

$$\text{No Real Solution}$$