

**Simplify: Show your work and circle your final answers.**

1.  $8x + 2x^2 - 3 - 2x - 3x^2 - 9$

2.  $-3x^2 - 10 + 8x + 6x^2 - 3x - 5x + 2$

3.  $\frac{3}{2}x^2 + 3x + \frac{7}{2}x^2 + 5x^3 - 6x - 9x^3$

4.  $-2y - 4 + 3y^2 - 5y + 3 - 4y^2 + 7y$

**Distribute:**

5.  $2(3x - 4)$

6.  $\frac{-2}{3}(3x^2 + 9x - 15)$

7.  $-(3x + 6y - 4)$

**Simplify:**

8.  $2(9 - 2x) + 3(x + 6)$

9.  $\frac{-1}{4}(12x - 8) - 4x + 10$

10.  $\frac{3}{2}(4x - 8) - (-2x - 1)$

11.  $3(2x^2 + x) - 2(3x^2 + 4x)$

12.  $3(2x^2 - 5x) - 4x^2 + 10x$

13.  $8x - 2x^2 - (-5x^2 - 8x)$

**Solve for x.**

14.  $-2x = -14$

15.  $\frac{x}{-2} = 6$

16.  $-4 = -3x - 10$

17.  $20 = 12 - 8x$

18.  $2 = \frac{x}{-4} - 3$

19.  $-5x - 2 = -22$

20.  $-3x - 7 = 13 + 2x$

21.  $9 = -3(x - 6)$

22.  $2(x - 6) = 8$

23.  $3x - 9 = 6x + 12$

24.  $19 = -2x - 6 - 3x$

25.  $2(x - 4) = 4x + 8$

26. What number is 20% of 35

27. 32 is what percent of 40

28. What percent of 60 is 24?

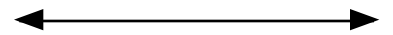
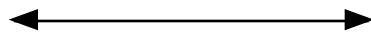
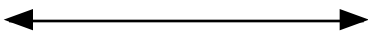
29. 15 is 30% of what number?

Graph each Inequality **on the number line** below the problem.

30.  $x \geq -4$

31.  $-3 > x$

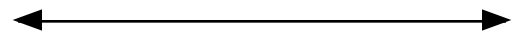
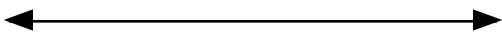
32.  $5 \leq x$



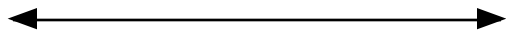
Solve and graph each Inequality **on the number line** below the problem.

33.  $-18 < -2x - 10$

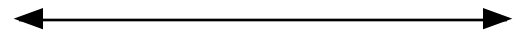
34.  $-6x < 18$



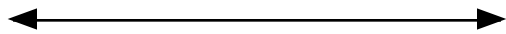
35.  $2x - 4 > -14$



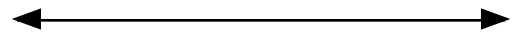
36.  $2x - 14 \geq 6$



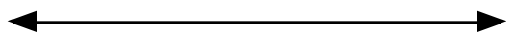
37.  $-18 \geq 3(x - 4)$



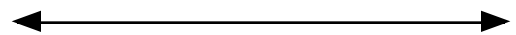
38.  $-8 \geq -x - 3$



39.  $15 + x > 4x - 6$

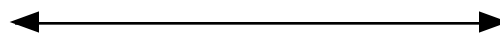
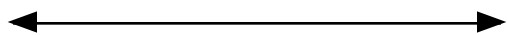


40.  $12 \geq -2x - 4$



41.  $-6 \leq \frac{x}{2} + 1$

42.  $2 < -2x + 16$



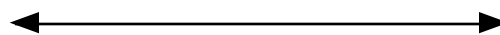
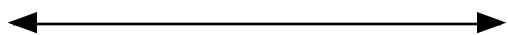
43.  $-4x - 3 < -15$

44.  $3x - 14 < -x - 14$



45.  $2(x - 8) \leq 4x - 8$

46.  $-6x - 3 \leq -3(x + 3)$



## Answers to Chapter 6, 7 and 8 Test Review:

1.  $-x^2 + 6x - 12$

2.  $3x^2 - 8$

3.  $-4x^3 + 5x^2 - 3x$

4.  $-y^2 - 1$

5.  $6x - 8$

6.  $-2x^2 - 6x + 10$

7.  $-3x - 6y + 4$

8.  $-x + 36$

9.  $-7x + 12$

10.  $8x - 11$

11.  $-5x$

12.  $2x^2 - 5x$

13.  $3x^2 + 16x$

14.  $x = 7$

15.  $x = -12$

16.  $-2 = x$

17.  $-1 = x$

18.  $-20 = x$

19.  $x = 4$

20.  $-4 = x$

21.  $3 = x$

22.  $x = 10$

23.  $-7 = x$

24.  $-5 = x$

25.  $-8 = x$

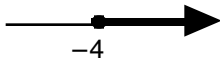
26. 7

27. 80%

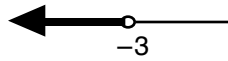
28. 40%

29. 50

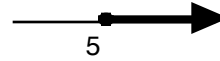
30.  $x \geq -4$



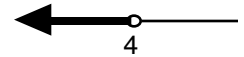
31.  $-3 > x$



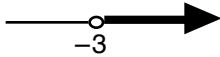
32.  $x \geq 5$



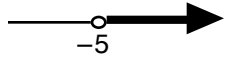
33.  $4 > x$



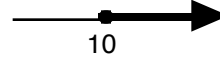
34.  $x > -3$



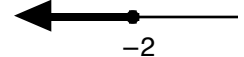
35.  $x > -5$



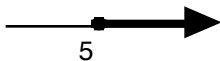
36.  $x \geq 10$



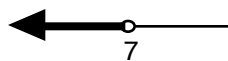
37.  $-2 \geq x$



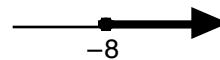
38.  $x \geq 5$



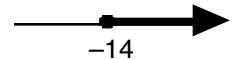
39.  $7 > x$



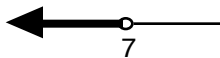
40.  $-8 \leq x$



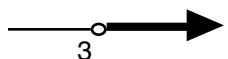
41.  $-14 \leq x$



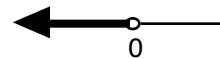
42.  $7 > x$



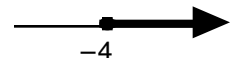
43.  $x > 3$



44.  $x < 0$



45.  $-4 \leq x$



46.  $2 \leq x$

