Answers without work to check. If you cannot find your mistake then please seek help EARLY! This assignment is worth 4 pts. 1) did you complete it 2) did you show all the work 3) did you correct in pen 4) did you get 75% of the problems correct?

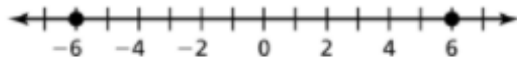**Pg. 32 answers. Check the ones you were supposed to do for your assignment.**

1. an apparent solution that must be rejected because it does not satisfy the original equation
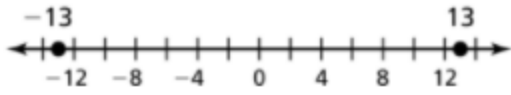
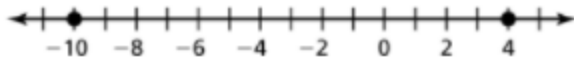2. An absolute value cannot be negative.

9. 9

10. 3

11. $w = -6, w = 6$;

12. no solution

13. no solution

14. $x = -13, x = 13$;

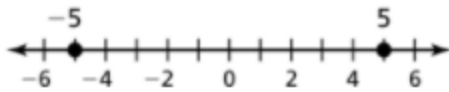**15.** $m = -10, m = 4$;

16. $q = -6, q = 22$;

17. $d = -5, d = 5$;

18. $t = -12, t = 12$;

19. $b = -3.5, b = 6$;

-3.5
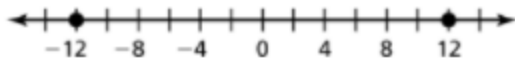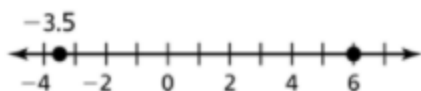
20. no solution

21. no solution

22. $v = -3, v = 6$;

-3

23. $s = 20$;

24. $p = -\frac{5}{4}, p = \frac{1}{4}$;

$-\frac{5}{4}$ $\frac{1}{4}$

25. a.   91.4   94.5
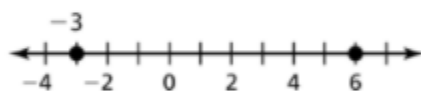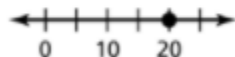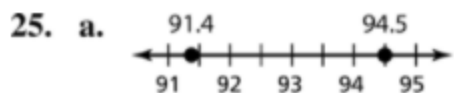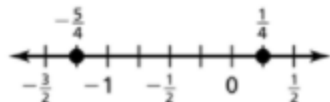
b. $|d - 92,950,000| = 1,550,000$

26. a.   15
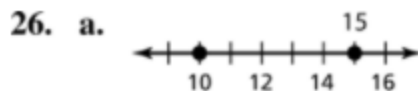
b. $|h - 12.5| = 2.5$

27. B

28. D

29. C

30. A

31. $|x - 13| = 5$

32. $|x - 2| = 8$

33. $|x - 5.5| = 3.5$

34. $|x + 7.5| = 2.5$

35. $n = 3, n = 5$

36. $c = -\frac{2}{3}, c = 1$

37. $b = 3, b = 5$

38. $k = -0.4, k = 6$

39. $p = \frac{2}{3}, p = 10$

46. no; The absolute value has to be isolated first, which makes the constant on the right positive.

47. **a.** $|x - 32| = 5$; 27%, 37%
 b. no; $\frac{1}{3}\left(33\frac{1}{3}\%\right)$ falls within the range of possible values.

48. **a.** $|x - 430| = 20$; 410 g, 450 g
 b. no; 407 grams is below the minimum acceptable weight.

49. The absolute value cannot be negative. So, there is no solution.

52. *b; d*

53. always; Square roots of the same number have the same absolute value.

54. always; $a - b$ and $b - a$ are opposites, so they will have the same absolute values.

55. sometimes; The equation will only have two solutions if p is positive.

56. always; The solutions are $p + 4$ and $p - 4$.

57. Absolute value equations will have no solution when the absolute value is equal to a negative number, one solution when the absolute value is equal to zero, and two solutions when the absolute value is equal to a positive number; *Sample answer:* $|x + 12| = -2$ has no solution, $|x + 12| = 0$ has one solution, and $|x + 12| = 2$ has two solutions.

58. *Sample answer:* In a round of a trivia game, you lose 5 points for an incorrect answer and win 5 points for a correct answer. You have 67 points. x represents your score after your next answer.

59. $x = 1, x = -5$; Interpret $|x + 2|$ as a single quantity and solve for it, then solve the resulting absolute value equation.

60. a. 40%, 44%; 0%, 4%
   b. Set the absolute value of x minus the percentage of the party interested in equal to 2, then solve for the minimum and maximum values.
   c. Republican; 44% is within the error range of 42%.

61. 1; If $c = d$, then the absolute value expression will be equal to 0; 2; If $c > d$, then $d - c$ will be negative. When this value is divided by a negative value of a, the result will be positive.

62. Addition Property of Equality

65. 6 in.

63. Division Property of Equality

66. 12 ft

64. 9 m

67. 9 cm