Elementary Solutions - 1.7

1. | 1 |
1

3. -| 1 |
-1

5. | 3 |
3

7. -| 3 |
-(3)
-3

9. | 6 |
6

11. -| 6 |
-(6)
-6

13. | 9 |
9

15. -| 9 |
-9

17. | - (-1) |
| 1 |
1

19. | 2 |
2

21. -| -2 |
-(2)
-2

23. -| -2 | + | -3 |
-(2) + 3
-2 + 3
1

25. | -8 | - | -6 |
8 - (6)
8 - 6
2

27. | 4 | + | -7 |
4 + 7
11

29. -| 5 | + | -10 |
-(5) + 10
-5 + 10
5

31. | -6 |
6

33. -| 9 |
-9

35. $|-5|$

5

37. $|-2| + |4|$

$2 + 4$

6

39. $|-4| - |-1|$

$4 - (1)$

$4 - 1$

3

41. $|4 - 1| + |3 - 8|$

$|3| + |-5|$

$3 + 5$

8

43. $|9 - 2| - |4 + 1|$

$|7| - |5|$

$7 - 5$

2

45. $|3 - 3^2| + |-7|$

$|3 - 9| + |-7|$

$|-6| + |-7|$

$6 + 7$

13

47. $|-6 - 5| + |3 - 9|$

$|-11| + |-6|$

$11 + 6$

17

49. $\left|-\frac{4}{5}\right|$

$\frac{4}{5}$

51. $5 \stackrel{?}{} 12$

Since 5 is less than 12:

$5 < 12$ or $5 \leq 12$

53. $-3 \stackrel{?}{} 7$

Since -3 is less than 7:

$-3 < 7$ or $-3 \leq 7$

55. $-(-7) \stackrel{?}{} -|-7|$

$7 \stackrel{?}{} -7$

Since 7 is greater than -7:

$7 > -7$ or $7 \geq -7$

57. $|-3| \stackrel{?}{} 2$

$3 \stackrel{?}{} 2$

Since 3 is greater than 2:

$3 > 2$ or $3 \geq 2$

59. $|\sqrt{9}| \,?\, |-\sqrt{9}|$

$|3| \stackrel{?}{} |-3|$

$3 \stackrel{?}{} 3$

Since 3 is equal to 3:

$3 = 3$ or $3 \leq 3$ or $3 \geq 3$

61. -19 ? -| -20 |
-19 ? -20
Since -19 is greater then -20:
-19 > - 20 or - 19 ≥ - 20

63.
On the number line, the two points which are five units from zero are __ and __?

| 5 | = 5 and | -5 | = 5
5 and -5 are five units from zero

65.
On the number line, the two points which are eight units from six are __ and __?

Since | 14 - 6 | = 8 and | -2 - 6 | = 8
14 and -2 are eight units from six

67.
On the number line, the two points which are four units from negative five are
__ and __ ?

Since | -9 + 5 | = 4 and | -1 + 5 | = 4
-9 and -1 are four units from -5

69. Find the distance between the number -5 and -12.
| -5 - (-12) |
| -5 + 12 |
| 7 |
7 units

71. Find the distance between the number -48 and 2.
| -48 - 2 |
| -50 |
50 units

73. Find the distance between the number -25 and -1.
| -25 - (-1) |
| -25 + 1 |
| -24 |
24 unints

75. Find the distance between the number -10 and -40.
| -10 - (-40) |
| -10 + 40 |
| 30 |
30 units