Lab 2 (1.1 – 1.2)  
MATH 090  
List your steps to support your solutions. No calculators allowed.

1. Classify the real number as a natural number, whole number, integer, rational number, and/or irrational number. The number may belong to more than one set.

<table>
<thead>
<tr>
<th></th>
<th>Natural Number</th>
<th>Whole Number</th>
<th>Integer</th>
<th>Rational Number</th>
<th>Irrational Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-\sqrt{11}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8.54</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Plot the set of numbers on the number line. \((-\frac{38}{2}, \frac{7}{4}, \frac{1}{2})\)

\[\text{Number Line Drawing}\]

3. Enter the correct symbol, <, >, or =, between the numbers to make a true statement.

a. \(-96 \ \overset{\text{?}}{\sim} \ 17\)  
b. \(-\frac{2}{3} \overset{\text{?}}{\sim} -\frac{2}{5}\)  
c. \(0.1 \overset{\text{?}}{=} \frac{1}{10}\)  
d. \(|-32| \overset{\text{?}}{>} -32\)

4. Find the opposite of the real numbers.

a. \(-29\)  
b. \(-1.8\)  

5. Find the absolute value.

a. \(|-29|\)  
b. \(|-1.8|\)

6. Write a mathematical expression for the word phrase.

a. Seventeen is greater than fifteen. \(17 > 15\)  
b. Thirty-eight is less than or equal to fifty-nine. \(38 \leq 59\)  
c. Twenty-three is greater than or equal to fourteen. \(23 \geq 14\)  
d. Three is at least one. \(3 \geq 1\)

7. For 70 home games in the 2016 season, a baseball team had a total fan attendance of about 3,669,680. Assuming equal attendance at all home games, how many people attended each home game?

\[\frac{3669680}{70} = 52424\]

52,424 people attended each game.

8. If postage for a standard postcard is $0.24. At this price, how much would it cost to mail 4 postcards?

\((0.24)4 = 0.96\)

It would cost $0.96 or 96 cents.
9. Perform the indicated operation.
   a. \(-3 + (-2)\)  
      \[= -5\]
   b. \(54 + 30\)  
      \[= 84\]
   c. \(-4.13 + 4.15\)  
      \[= 0.02\]
   d. \(\frac{9}{5} + \left(\frac{-8}{5}\right)\)  
      \[= -17\]
   e. \(-10 - (-7)\)  
      \[= -3\]
   f. \(\frac{1}{2} + \frac{12}{24}\)  
      \[= 0\]
   g. \(\frac{2}{5} + \frac{4}{3}\)  
      \(= \frac{16}{15}\)
   h. \(2.705 - (-10.23)\)  
      \[= 12.935\]

10. Write a mathematical expression for the word phrase.
   a. 8 added to -3  
      \[8 + (-3)\]
   b. -8 increased by 16  
      \[-8 + 16\]
   c. -8 increased by 16  
      \[-8 + 16\]
   d. 2.8 added to 1.5 more than 8.9  
      \[2.8 + (8.9 + 1.5)\]
   e. 19 more than -16  
      \[-16 + 19\]
   f. 19 less than -16  
      \[-16 - 19\]
   g. The difference of 9 and -8  
      \[9 - (-8)\]
   h. -19 decreased by 16  
      \[-19 - 16\]

11. One day, the industrial average of a company lost 114.88 points. The next day, it lost 66.58 points. What was the total result for the two days?
    The loss was 181.46 points.

12. A certain point in Ocean A is at an elevation of -8.061 m. A certain point in Ocean B is at an elevation of -10.255 m. What is the difference in elevation between the point in Ocean A and the point in Ocean B?
    \[-10.255 - (-8.061)\]  
    \[= -10.255 + 8.061\]  
    \[= -2.194\]
    The point in Ocean A is 2.194 meters less than the point in Ocean B.