THE ABSOLUTE VALUE OF A NUMBER
N-GEN MATH 6 HOMEWORK

FLUENCY

1. State what each of the following is equal to.

   (a) \(|-9| = \) ________  
   (b) \(|7| = \) ________  
   (c) \(|-63| = \) ________

   (d) \(|0| = \) ________  
   (e) \(|-\frac{4}{5}| = \) ________  
   (f) \(|\frac{7}{3}| = \) ________

   (g) \(|-0.83| = \) ________  
   (h) \(|6\frac{3}{4}| = \) ________  
   (i) \(|-2.005| = \) ________

2. Find the value of each of the following expressions.

   (a) \(|-10|+|3| = \) ________  
   (b) \(4 \times |-5| = \) ________  
   (c) \(|-25| - |-7| = \) ________

3. Place a >, <, or = symbol in each circle to make the statement true.

   (a) \(-10 \bigcirc -5 \) ________  
   (b) \(|-10| \bigcirc |-5| \) ________  
   (c) \(|-12| \bigcirc |0| \) ________

   (d) \(|-30| \bigcirc |-55| \) ________  
   (e) \(|-14| \bigcirc |14| \) ________  
   (f) \(22 \bigcirc |-16| \) ________

4. State whether each statement below is true (T) or false (F).

   (a) \(-9 > -3 \) ________  
   (b) \(|-5| < |-10| \) ________  
   (c) \(|-25| > 15 \) ________

   (d) \(|-6| = \frac{18}{3} \) ________  
   (e) \(-18 > |-20| \) ________  
   (f) \(0 > |-10| \) ________
**Using Your Math**

5. Scientists are installing six probes both above and beneath the ocean’s surface. The vertical location of the probes is positive if they are above the water and negative if they are below the water. The six probes vertical positions are given in the table below.

(a) How many of the probes are below water? How can you tell?

(b) Is there a prove at the ocean’s surface? Which one?

(c) Which probe is farthest from the ocean’s surface? Justify your answer with an inequality statement.

(d) What is the distance, in feet, between Probe B and Probe D? Explain how you arrived at your answer.

<table>
<thead>
<tr>
<th>Probe</th>
<th>Vertical Position (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>−12</td>
</tr>
<tr>
<td>B</td>
<td>−6</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
</tr>
<tr>
<td>F</td>
<td>10</td>
</tr>
</tbody>
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**Reviewing Your Math**

6. Find the following quotient. Then, check your work using multiplication.

(a) 7.2 \(\overline{)18.648}\)  

(b) check with multiplication: