Two's Compliment Worksheet

Whole Numbers:

<table>
<thead>
<tr>
<th>Decimal</th>
<th>2’s Compliment Representation</th>
<th>Times -1</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>111110</td>
<td>000010</td>
</tr>
<tr>
<td>125</td>
<td>01111101</td>
<td>1000011</td>
</tr>
<tr>
<td>-55</td>
<td>1001001</td>
<td>0110111</td>
</tr>
<tr>
<td>-8</td>
<td>111000</td>
<td>001000</td>
</tr>
<tr>
<td>21</td>
<td>010101</td>
<td>101011</td>
</tr>
<tr>
<td>-1</td>
<td>11111</td>
<td>00001</td>
</tr>
<tr>
<td>-28</td>
<td>100100</td>
<td>011100</td>
</tr>
<tr>
<td>6</td>
<td>000110</td>
<td>111010</td>
</tr>
</tbody>
</table>

16-Bit Floating Point
[10 Bit Mantissa Field, 6 Bit Exponent]
(Rounding Errors May Occur)

<table>
<thead>
<tr>
<th>Binary</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000000000011111</td>
<td>-1.0995x10^12</td>
</tr>
<tr>
<td>1000000001111011</td>
<td>-15.0025</td>
</tr>
<tr>
<td>0000000001100000</td>
<td>2.3283x10^-10</td>
</tr>
<tr>
<td>1000110101111100</td>
<td>35.3</td>
</tr>
<tr>
<td>000000000111101</td>
<td>0.125</td>
</tr>
<tr>
<td>0001000000000100</td>
<td>2048</td>
</tr>
<tr>
<td>0111111011001010</td>
<td>520000.2</td>
</tr>
</tbody>
</table>