EXERCISE 8.2

1. Complete the table with the help of these boxes and use decimals to write the number.

(a) 
(b) 
(c) 

Solutions:

<table>
<thead>
<tr>
<th>Rows</th>
<th>Ones</th>
<th>Tenth</th>
<th>Hundreds</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0.26</td>
</tr>
<tr>
<td>(b)</td>
<td>1</td>
<td>3</td>
<td>8</td>
<td>1.38</td>
</tr>
<tr>
<td>(c)</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>1.28</td>
</tr>
</tbody>
</table>

2. Write the numbers given in the following place value table in decimal form.

<table>
<thead>
<tr>
<th>Rows</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
<th>Tenth</th>
<th>Hundredths</th>
<th>Thousandth</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>(b)</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>(c)</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>(d)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>(e)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Solutions:
(a) $3 + 2/10 + 5/100$
   $= 3 + 0.2 + 0.05$
   $= 3.25$
(b) $100 + 2 + 6/10 + 3/100$
   $= 102 + 0.6 + 0.03$
   $= 102.63$
(c) $30 + 2/100 + 5/1000$
= 30 + 0.02 + 0.005
= 30.025
(d) 200 + 10 + 1 + 9 / 10 + 2 / 1000
= 211 + 0.9 + 0.002
= 211.902
(e) 10 + 2 + 2 / 10 + 4 / 100 + 1 / 1000
= 12 + 0.2 + 0.04 + 0.001
= 12.241

3. Write the following decimals in the place value table.
(a) 0.29
(b) 2.08
(c) 19.60
(d) 148.32
(e) 200.812
Solutions:
(a) 0.29
= 0.2 + 0.09
= 2 / 10 + 9 / 100
(b) 2.08
= 2 + 0.08
= 2 + 8 / 100
(c) 19.60
= 19 + 0.60
= 10 + 9 + 6 / 10
(d) 148.32
= 148 + 0.3 + 0.02
= 100 + 40 + 8 + 3 / 10 + 2 / 100
(e) 200.812
= 200 + 0.8 + 0.01 + 0.002
= 200 + 8 / 10 + 1 / 100 + 2 / 1000

<table>
<thead>
<tr>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
<th>Tenths</th>
<th>Hundredths</th>
<th>Thousandths</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

4. Write each of the following as decimals.
(a) 20 + 9 + 4 / 10 + 1 / 100
(b) 137 + 5 / 100
(c) 7 / 10 + 6 / 100 + 4 / 1000
(d) 23 + 2 / 10 + 6 / 1000
(e) 700 + 20 + 5 + 9 / 100
Solutions:
(a) 20 + 9 + 4 / 10 + 1 / 100
   = 29 + 0.4 + 0.01
   = 29.41
(b) 137 + 5 / 100
   = 137 + 0.05
   = 137.05
(c) 7 / 10 + 6 / 100 + 4 / 1000
   = 0.7 + 0.06 + 0.004
   = 0.764
(d) 23 + 2 / 10 + 6 / 1000
   = 23 + 0.2 + 0.006
   = 23.206
(e) 700 + 20 + 5 + 9 / 100
   = 725 + 0.09
   = 725.09

5. Write each of the following decimals in words.
(a) 0.03
(b) 1.20
(c) 108.56
(d) 10.07
(e) 0.032
(f) 5.008
Solutions:
The following are the decimals in words
(a) 0.03 = zero point zero three
(b) 1.20 = one point two zero
(c) 108.56 = one hundred eight point five six
(d) 10.07 = ten point zero seven
(e) 0.032 = zero point zero three two
(f) 5.008 = five point zero zero eight

6. Between which two numbers in tenths place on the number line does each of the given number lie?
(a) 0.60
(b) 0.45
(c) 0.19
(d) 0.66
(e) 0.92
(f) 0.57
Solutions:
(a) 0.60 lies between 0 and 0.1 in tenths place
(b) 0.45 lies between 0.4 and 0.5 in tenths place
(c) 0.19 lies between 0.1 and 0.2 in tenths place
(d) 0.66 lies between 0.6 and 0.7 in tenths place  
(e) 0.92 lies between 0.9 and 1.0 in tenths place  
(f) 0.57 lies between 0.5 and 0.6 in tenths place  

7. Write as fractions in lowest terms.  
(a) 0.60  
(b) 0.05  
(c) 0.75  
(d) 0.18  
(e) 0.25  
(f) 0.125  
(g) 0.066  

Solutions:  
(a) \(0.60 = \frac{60}{100} = \frac{6}{10} = \frac{3}{5}\)  
(b) \(0.05 = \frac{5}{100} = \frac{1}{20}\)  
(c) \(0.75 = \frac{75}{100} = \frac{3}{4}\)  
(d) \(0.18 = \frac{18}{100} = \frac{9}{50}\)  
(e) \(0.25 = \frac{25}{100} = \frac{1}{4}\)  
(f) \(0.125 = \frac{125}{1000} = \frac{1}{8}\)  
(g) \(0.066 = \frac{66}{1000} = \frac{33}{500}\)