Mental Math

There are several ways that you can add and subtract decimals mentally to solve a problem.

**Commutative Property of Addition**
You can add two decimal numbers in any order.

\[ 15.75 + 2.25 = 2.25 + 15.75 \]

**Associative Property of Addition**
You can change the groupings of addends.

\[ 1.7 + (1.3 + 7) = (1.7 + 1.3) + 7 \]

**Compatible numbers** are numbers that are easy to compute mentally.

\[ 2.6 + 9.3 + 7.4 \]

\[ 2.6 \text{ and } 7.4 \text{ are compatible because they are easy to add.} \]

\[ 2.6 + 9.3 + 7.4 = (2.6 + 7.4) + 9.3 \]

\[ = 10 + 9.3 = 19.3 \]

**With compensation**, you adjust one or both decimal numbers to make computations easier and compensate to get the final answer.

\[ 3.76 - 1.26 \]
\[ -0.01 -0.01 \]
\[ \downarrow \quad \downarrow \]
\[ 3.75 - 1.25 = 2.5 \]

Add or subtract mentally.

1. \[ 16.9 + 12.1 = \] ________

2. \[ 100.5 - 21.5 = \] ________

3. \[ 8.01 + 1.09 = \] ________

4. \[ 2.65 + 4.01 + 3.34 = \] ________

5. How much heavier is a Hippo than a Moose?

6. How heavy are the Elephant and the Rhino combined?

7. What is the total weight of all four animals?

**Weight of Zoo Animals**

<table>
<thead>
<tr>
<th>Animal</th>
<th>Weight (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hippo</td>
<td>2.5</td>
</tr>
<tr>
<td>Elephant</td>
<td>3.85</td>
</tr>
<tr>
<td>Rhino</td>
<td>2.15</td>
</tr>
<tr>
<td>Moose</td>
<td>.5</td>
</tr>
</tbody>
</table>