

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.

$$15.75 + 2.25 = 2.25 + 15.75$$

Compatible numbers are numbers that are easy to compute mentally.

$$2.6 + 9.3 + 7.4$$

2.6 and 7.4 are compatible because they are easy to add.

$$\begin{aligned} 2.6 + 9.3 + 7.4 &= (2.6 + 7.4) + 9.3 \\ &= 10 + 9.3 = 19.3 \end{aligned}$$

Associative Property of Addition

You can change the groupings of addends.

$$1.7 + (1.3 + 7) = (1.7 + 1.3) + 7$$

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

$$\begin{array}{r} 3.76 - 1.26 \\ - .01 - .01 \\ \hline \downarrow \quad \downarrow \\ 3.75 - 1.25 = 2.5 \end{array}$$

Add or subtract mentally.

- $16.9 + 12.1 =$ _____
- $100.5 - 21.5 =$ _____
- $8.01 + 1.09 =$ _____
- $2.65 + 4.01 + 3.34 =$ _____

- How much heavier is a Hippo than a Moose?

- How heavy are the Elephant and the Rhino combined?

- What is the total weight of all four animals?

Weight of Zoo Animals

Animal	Weight (Tons)
Hippo	2.5
Elephant	3.85
Rhino	2.15
Moose	.5