

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.

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

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

Name _____

Mental Math

Show how you can use mental math to add or subtract.

1. $7.03 + 9.0 + 3.07 =$ _____ 2. $63.75 - 13.25 =$ _____

Estimated Population in Millions

City	State	Population
San Antonio	Texas	1.4 million
Phoenix	Arizona	1.6 million
San Diego	California	1.3 million
Chicago	Illinois	2.7 million

3. How many more people live in Phoenix than live in San Antonio? _____
4. How many people live in San Diego and Chicago combined? _____
5. A hotel bought 56.4 lb of apples in August from a local orchard. In September, the hotel purchased an additional 52.34 lb of apples and 32.26 lb of strawberries. How many pounds of fruit did the hotel buy?
- A** 132 lbs **B** 141 lbs **C** 139 lbs **D** 140.5 lbs
6. **Explain It** Write the definition and give an example of the Commutative Property of Addition using decimal numbers.
