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Date \_\_\_\_\_

## Basic Operations with Decimals - Guided Lesson Explanation

### Explanation#1

Step 1) First, we look at what is asked of you.

“Add and subtraction”

Step 2a) we have to add

$$\begin{array}{r} 543.50 \\ + 247.83 \\ \hline \end{array}$$

Add as you would add whole numbers. Remember to write the decimal point in the answer.

$$\begin{array}{r} \phantom{0}^1 \phantom{0}^1 \\ 543.50 \\ + 247.83 \\ \hline 791.33 \end{array}$$

The sum is 791.33

Step 2b) We have to subtract

$$\begin{array}{r} 53.43 \\ - 2.23 \\ \hline \end{array}$$

Start with the whole numbers. Write the decimal point in your answer.

$$\begin{array}{r} 53.43 \\ - 2.23 \\ \hline 51.20 \end{array}$$

So the answer is 51.20.



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**Explanation#2**

Step 1) Observe carefully what we have to find out.

"Divide and multiplication"

Step 2c)  $3.6 \div 0.3$ 

$$0.3 \overline{) 3.6}$$

Move the decimals to the right on both until you are dividing by a whole number:

$$0.3 \overline{) 3.6} \longrightarrow 3 \overline{) 36}$$

Don't need

Divide as whole numbers.

$$\begin{array}{r} 12 \\ 3 \overline{) 36} \\ \underline{-3} \phantom{0} \\ 06 \\ \underline{-6} \\ 0 \end{array}$$

So the quotient is 12 and remainder is 0.

Step 2d)  $6.44 \times 6.98$ 

Multiply as you would multiply whole numbers. Multiply the ones.

$$\begin{array}{r} 33 \\ 6.44 \\ \times 6.98 \\ \hline 5152 \end{array}$$

Multiply the tens.

$$\begin{array}{r} 33 \\ 6.44 \\ \times 6.98 \\ \hline 5152 \\ 57960 \end{array}$$



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Multiply the hundreds.

$$\begin{array}{r} 2\ 2 \\ \mathbf{6.44} \\ \times \mathbf{6.98} \\ \hline 5152 \\ 57960 \\ \hline \mathbf{386,400} \end{array}$$

Now add the results.

$$\begin{array}{r} 6.44 \\ \times 6.98 \\ \hline 5,152 \\ 57,960 \\ + \mathbf{386,400} \\ \hline \mathbf{449,512} \end{array}$$

The product is 449,512. We now need to account for all the decimal places.

6.44 and 6.98 each have 2 decimal places for a total of 4 decimal places.

We need to place those places in our final answer:

**449,512.**

**44.9512**



**Move 4 place**



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**Explanation#3**

Step 1) First we have to see what we have to calculate:

"Round your answer to the nearest hundredth."

Step 2) Look at first digit from left. It is less than 3 so we will divide 23 by 3.

$$\begin{array}{r}
 77 \\
 \hline
 3 \overline{) 233} \\
 \underline{-21} \phantom{0} \\
 23 \\
 \underline{21} \\
 2
 \end{array}$$

The remainder 2 is less than 3, so add zeroes after the decimal point in the number you are dividing until you get to the thousandths' place. To round answer to the nearest hundredths, we need to know the thousandths' place.

$$\begin{array}{r}
 77.666 \\
 \hline
 3 \overline{) 233.000} \\
 \underline{-21} \phantom{00} \\
 23 \phantom{0} \\
 \underline{21} \phantom{0} \\
 20 \phantom{0} \\
 \underline{18} \phantom{0} \\
 20 \phantom{0} \\
 \underline{18} \phantom{0} \\
 20 \\
 \underline{18} \\
 2
 \end{array}$$

We got digit at thousandths place so we do not need to divide further.

Round answer to the nearest hundredths. As 6 on thousandths is more than 5, round 6 up

$$77.666 \rightarrow 77.67$$

So the answer is 77.67.

