

TOPIC: ADDING AND SUBTRACTING DECIMALS

Adding Decimals

◆ We add decimal values by *lining* up decimal points & adding like whole numbers. Insert ____s to line up neatly.

► Estimate to check accuracy by _____ decimal to whole #'s and adding.

Recall	Adding Whole Numbers		New	Adding Decimal Numbers	
	$\begin{array}{r} 1 \\ 584 \\ + 230 \\ \hline 814 \end{array}$			$\begin{array}{r} 5.84 \\ + 2.3 \\ \hline \end{array}$	$\begin{array}{r} 5.84 \approx \\ 2.3 \approx \\ \hline _ + _ = \end{array}$

◆ Whole numbers can be written as decimals with the decimal point after the _____ digit.

EXAMPLE

Add, then estimate to see if your answer is reasonable.

$$3.09 + 7 + 9.81$$

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PRACTICE

Add, then estimate to see if your answer is reasonable.

(A) $23.16 + 15.25$

(B) $186.79 + 7.548$

EXAMPLE

Add, then estimate to see if your answer is reasonable.

(A)
$$\begin{array}{r} 105.67 \\ 3.242 \\ + 21.498 \\ \hline \end{array}$$

(B) $200 + 34.721 + 0.6815$

EXAMPLE

The items below are from a grocery receipt. If the sales tax is \$2 what is the final price paid?

Tomatoes: \$2.75

Beef: \$6.49

Pepper Jack Cheese: \$4.05

Potato Chips: \$2.99

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PRACTICE

If $x = 3.14$ and $y = 12.7$, complete the operation below:

$$x + y$$

PRACTICE

If $a = 0.421$ and $b = 54.3$, complete the operation below:

$$a + a + b$$

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Subtracting Decimals

◆ Recall: We can add decimals by lining up the decimal points, inserting 0s as needed, then adding like normal.

► We use the same strategy for subtracting! Like whole #s, we can _____ when needed.

Recall	Adding Whole Numbers	New	Subtracting Decimal Numbers
	$\begin{array}{r} 5.39 \\ + 2.40 \\ \hline 7.79 \end{array}$		$\begin{array}{r} 5.39 \\ - 2.4 \\ \hline \end{array}$
	$\begin{array}{l} 5.39 \approx 5 \\ 2.4 \approx 2 \\ 5 + 2 = 7 \end{array}$		$\begin{array}{l} 5.39 \approx 5 \\ 2.4 \approx 2 \\ \underline{\quad} - \underline{\quad} = \end{array}$

EXAMPLE

Subtract, then estimate to see if your answer is reasonable.

(A) $30 - 12.63$

(B) $19.02 - 10.31$

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EXAMPLE

Subtract the following decimals.

$$(A) -13.62 - (-24)$$

$$(B) -40 - 9.065$$

$$(C) 2.036 - (-105.9)$$

PRACTICE

Subtract, then estimate to see if your answer is reasonable.

$$(A) \quad 25.96 - 14.25$$

$$(B) \quad 7.548 - 18.609$$

PRACTICE

Add, then estimate to see if your answer is reasonable.

$$-8.4 + 3.7$$

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PRACTICE

Is $p = 4.6$ a solution to the following equation?

$$p + 3.8 = 8.4$$

[SOLUTION | NOT A SOLUTION]

PRACTICE

Is $y = 2.5$ a solution to the following equation?

$$3 - y = 6.8 + y$$

[SOLUTION | NOT A SOLUTION]

EXAMPLE

Evaluate each expression for $a = 4.8$, $b = 12.34$ and $c = 0.68$.

(A) $a - c$

(B) $b - a - c$