



## Grade 4: Adding Decimals by Decomposition

Today after we review our warm up, we will be adding decimals using decomposition. Adding decimals this way will help you get ready for algebra by practicing using the **commutative and associative properties of addition**. Also, you will practice using **Like Terms**, which we will talk about after the warm up.

### Debrief of warm-up:

Ask: **Number One.** Which of these has the greatest value? (12.1)

Ask: **Number Two.** What is 15 in expanded form? ( $10 + 5$ )

Ask: What is 49 in expanded form? ( $40 + 9$ )

Ask: What is 273 in expanded form? ( $200 + 70 + 3$ )

Ask: What is 458 in expanded form? ( $400 + 50 + 8$ )

Say: Raise your hand if you decomposed these numbers in any other way?  
(hands) Turn to your partner and listen to your partner's ideas.

Say: **Number Three.** We should all know these definitions already.

Say: Raise your hand if you know what a **sum** is. (what you get when you add numbers)Thumbs up if you agree.

Say: Raise your hand if you know what an **addend**



I can see that 4 is like

$$\begin{aligned} & 2.5 + 4.9 \\ &= (2 + .5) + (4 + .9) \\ &= 2 + .5 + 4 + .9 \end{aligned}$$

(Add On)

$$\begin{aligned} & 2.5 + 4.9 \\ &= (2 + .5) + (4 + .9) \\ &= 2 + .5 + 4 + .9 \\ &= (2 + 4) + (.5 + .9) \\ &= 6 + 1.4 \end{aligned}$$





What is  $8 + 1.2$ ? [9.2] What is  $9.2 + .05$ ? [9.25]

You Try. If you finish early, make up a problem of your own.  
So...you are either working on the You Try or working on your own problem.

Write: **You Try:  $6.64 + 2.94$**  After the You Try: Debrief.

If they are ready, take it up a notch:

**You Try #2:  $2.73 + 4.58$**  Then debrief.

