

Diving into Mastery – Diving

Adult Guidance with Question Prompts



Add Two 2-Digit Numbers (Across a 10)

Children will use base ten to partition 2-digit numbers and add them together, crossing a ten by practically regrouping 10 ones for 1 ten.

What numbers are represented by each set of base ten?

How many tens/ones are there in each number?

How many ones are equal to 1 ten?

What is 5 ones add 7 ones?

How many tens and how many ones are 12 ones equal to?

What is 4 tens add 2 tens?

What is 6 tens add 1 ten add 2 ones?

Can you explain what each part of this calculation represents?

What steps did you follow to find the total?

Can you explain how to partition these numbers?

Can you use the base ten to add together the ones/tens?

What will the total be? Can you prove that?

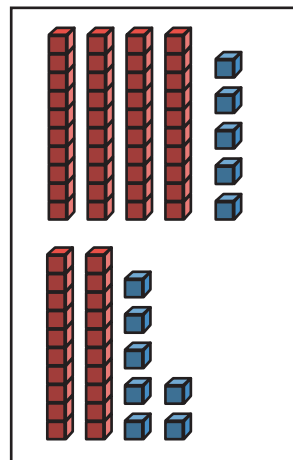
Stem Sentences

- ____ ones add ____ ones is the same as ____ ten and ____ ones.
- ____ tens and ____ ones equals ____.

Add Two 2-Digit Numbers (Across a 10)



Use base ten to work out these addition calculations.

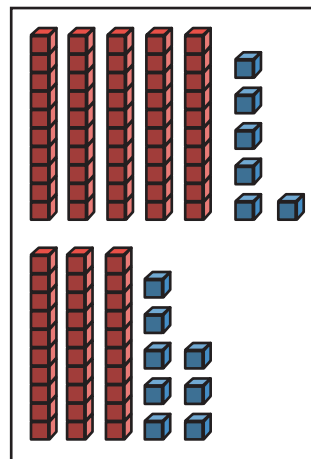


$$45 + 27 = \underline{\quad\quad}$$

$$5 + 7 = 10 + \underline{\quad}$$

$$40 + 20 = \underline{\quad\quad}$$

$$\underline{\quad\quad} + 10 + \underline{\quad\quad} = \underline{\quad\quad}$$



$$56 + 38 = \underline{\quad\quad}$$

$$\underline{\quad\quad} + \underline{\quad\quad} = 10 + \underline{\quad\quad}$$

$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} + 10 + \underline{\quad\quad} = \underline{\quad\quad}$$

$$34 + 29 = \underline{\quad\quad}$$

$$43 + 48 = \underline{\quad\quad}$$

$$65 + 17 = \underline{\quad\quad}$$

$$29 + 23 = \underline{\quad\quad}$$



Diving into Mastery – Deeper

Adult Guidance with Question Prompts



Add Two 2-Digit Numbers (Across a 10)

Children will reason about the efficiency of different addition strategies used to add two 2-digit numbers. Provide base ten and number lines to support children as they try both methods.

What do you think of Sol's method?

Do you think you could reach the correct answer easily that way? Explain why.

Can you use Sol's method? Did you reach the same answer?

What do you think about Hanna's method?

Can you use Hanna's method to find the answer?

How could the equipment help you?

Which method do you think is best? Why?

Which method is quicker? Which is more likely to result in making a mistake? Why?

Who has the correct answer? Prove it.

Stem Sentences

- This method is better because...
- I can prove the answer is ____ by...

Add Two 2-Digit Numbers (Across a 10)



Sol and Hanna are solving this calculation.

$$56 + 39$$



Sol

I counted on from 56, counting on first in tens and then in ones. I think the answer 94.

I added all the tens together and then added all the ones together. Then, I added the tens and ones together. I think the answer is 95.



Hanna

Who has the correct answer?

Prove it.

Which do you think is the better method? Why?



Diving into Mastery – Deepest Adult Guidance with Question Prompts



Add Two 2-Digit Numbers (Across a 10)

Children will apply their understanding of adding two 2-digit numbers to solve a problem. Provide children with base ten equipment and digit cards to model the problem.

How many tens/ones are in 65?

What can you tell me about the other numbers in the calculation?

Can you use the base ten to model what we know so far?

What is 6 tens add 1 ten?

How is it possible for the total to have 8 tens?

How many ones are equal to 1 ten?

Could the second number have 2 ones? Why not?

What is the smallest number of ones that could make a total that has 8 tens? Prove it.

Can you work systematically to find the all the possible answers?

Stem Sentences

- If the first card is _____, the second card must be _____ because...
- _____ tens and _____ ones equals _____.

Add Two 2-Digit Numbers (Across a 10)



Meg is using digit cards to make addition number sentences.

She drops two cards on the floor.

$$\begin{array}{|c|} \hline 6 \\ \hline \end{array} \begin{array}{|c|} \hline 5 \\ \hline \end{array} + \begin{array}{|c|} \hline 1 \\ \hline \end{array} \begin{array}{|c|} \hline \\ \hline \end{array} = \begin{array}{|c|} \hline 8 \\ \hline \end{array} \begin{array}{|c|} \hline \\ \hline \end{array}$$

Which digit cards could Meg have dropped? She could have used the same digit twice.

Can you find all of the possible answers?

Can you use your own digit cards to make addition sentences that cross a 10?

What do you notice about the total number of ones?

