

Diving into Mastery - Diving

Adult Guidance with Question Prompts

Children need to have a secure understanding of place value before attempting addition bridging ten.

They must:

- understand that ten ones are equal to one ten;
- be able to count to 20;
- know number bonds within 10;
- be able to partition 2-digit numbers;
- know the difference between 1-digit and 2-digit numbers.

When crossing ten, children could complete the number lines by jumping on in ones or they could partition the single digit and target the multiple of ten, for example for $56 + 6$ they could partition 6 into 4 and 2, jumping first to 60 and then on to 62.

Where will you start on the number line?

How many jumps do you need to do?

Can you use partitioning to find a more efficient way?

Can you jump to the next multiple of ten and then on from there?

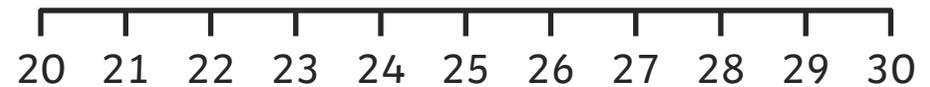
Do you think that saves time? Why?

Add 2-Digits and 1-Digit - Crossing Ten



Jump along the number lines to solve these calculations:

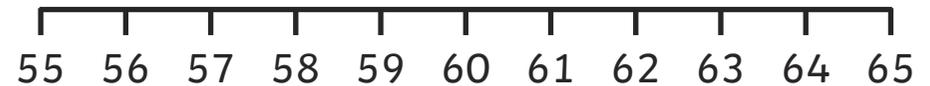
$$22 + 7$$



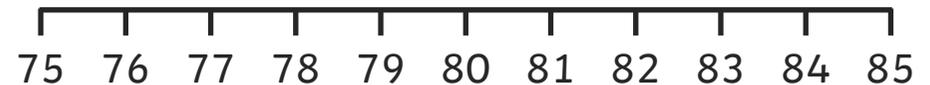
$$34 + 5$$



$$56 + 6$$



$$77 + 4$$



Diving into Mastery - Deeper

Adult Guidance with Question Prompts

Children reason about how partitioning can make this addition more efficient and how the recombining must be done carefully to reach the correct answer. Children must have a secure understanding of place value to calculate in this way.

Why has Sam used a part-whole model?

Why did Sam add six and eight?

Was he right to do that?

Has he got that part right?

Why did he then do $20 + 14$?

Where did he go wrong?

Do you know 214 is the wrong total without working it out? How?

Would you expect a 2-digit or 3-digit answer?

What is the correct answer?

Can you use the same method to calculate $35 + 9$?

Did your partner do it the same way?

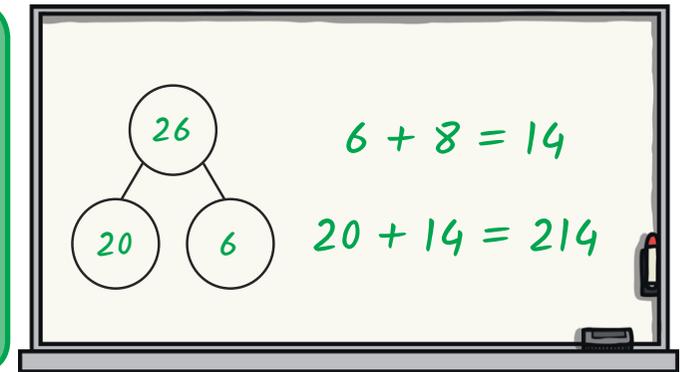
Add 2-Digits and 1-Digit - Crossing Ten



Sam has been asked to solve this calculation:

$$26 + 8$$

He writes this:



Sam has made a mistake. Can you explain what he should have done?

Use partitioning to show Sam how to solve this calculation:

$$35 + 9$$

Explain to a partner how you have worked it out. Did they do it the same way?

Diving into Mastery - Deepest

Adult Guidance with Question Prompts

Children should recognise the difference between the 1-digit and 2-digit numbers. Children may draw their own number lines or use dry wipe number lines for this activity. Encourage systematic working to find all solutions.

What sort of numbers are in the squares?

What sort of numbers are in the circles?

What is the first calculation you will write?

How will you find the total?

Would partitioning the single-digit number be a more efficient method?

How many different calculations can you write?

How can you make sure you have found all the ways?

Add 2-Digits and 1-Digit - Crossing Ten



Add a number from a circle to a number from a square.

$$54 + 5$$

How many different totals can you make?

