

# Diving into Mastery - Diving

## Adult Guidance with Question Prompts

Children use the number bonds to 10 and 20 that they know and apply them to derive facts for greater numbers. They do this for both addition and subtraction facts. Children could use ten-frames and counters or base ten blocks to represent the calculations.

Which calculations do you know the answers to from memory?

How can you use those facts to help with the related facts?

What patterns can you see in the tens and ones?

How are the calculations related?

How can that help you?

What equipment could you use to represent the relationship between the two calculations?

Look at the two bar models.

What is the same?

What is different?

How can you use the first to help with the second?

## Related Facts



Use the first facts to calculate the second facts.

$2 + 6 =$	<input type="text"/>		$12 + 6 =$	<input type="text"/>
$3 + 7 =$	<input type="text"/>		$30 + 70 =$	<input type="text"/>
$9 - 3 =$	<input type="text"/>		$19 - 3 =$	<input type="text"/>
$8 - 5 =$	<input type="text"/>		$80 - 50 =$	<input type="text"/>

Complete the bar models.



Can you use practical equipment to represent these calculations?

# Diving into Mastery - Deeper

## Adult Guidance with Question Prompts

Children use the number bonds to 10 that they know and apply them to derive facts for greater numbers. They could use ten-frames and counters or base ten blocks to represent the calculations if they find it helpful. Children should use the language of 'tens' and 'ones' in their explanations.

Do you recognise the facts Ben has written?

Can you continue the pattern from memory?

What pattern can you see in the list of facts?

Look at his related facts. How are they related?

What patterns can you see in the list?

Compare the two lists of facts you have made. How are they the same?

How are they different?

Can you make pairs of related facts?

## Related Facts



Ben starts writing a pattern.

Continue his pattern:

$$1 + 9 = 10$$

$$2 + 8 = 10$$

$$3 + 7 = 10$$



Then he writes a related pattern.

Continue his pattern:

$$10 + 90 = 100$$

$$20 + 80 = 100$$

$$30 + 70 = 100$$



How are they the same?

How are they different?

Can you pair up the related facts?

# Diving into Mastery - Deepest

## Adult Guidance with Question Prompts

Children use number bonds to solve related facts problems. Children could use ten-frames and counters, base ten blocks, part-whole models or bar-models to represent the calculations.

Can you use known facts to solve the first problem?

Can you use the first problem to solve the second problem?

Can you represent each problem as a calculation?

Are there any other ways you could represent the problem?

Can you explain how you did it to a friend?

## Related Facts



In PE, some children were throwing balls into hoops. How many points did the children score?  
Hint: use the first fact to help with the second.

Aima scored 5 and then she scored 4 more.

Ben scored 5 and then he scored 14 more.

Hari scored 2 and then he scored 6 more.

Jess scored 12 and then she scored 6 more.



Ben scored 2 points and then he scored 3 points.

Lisa scored 20 points and then she scored 30 points.

Make up some of your own scores like these using related facts.

