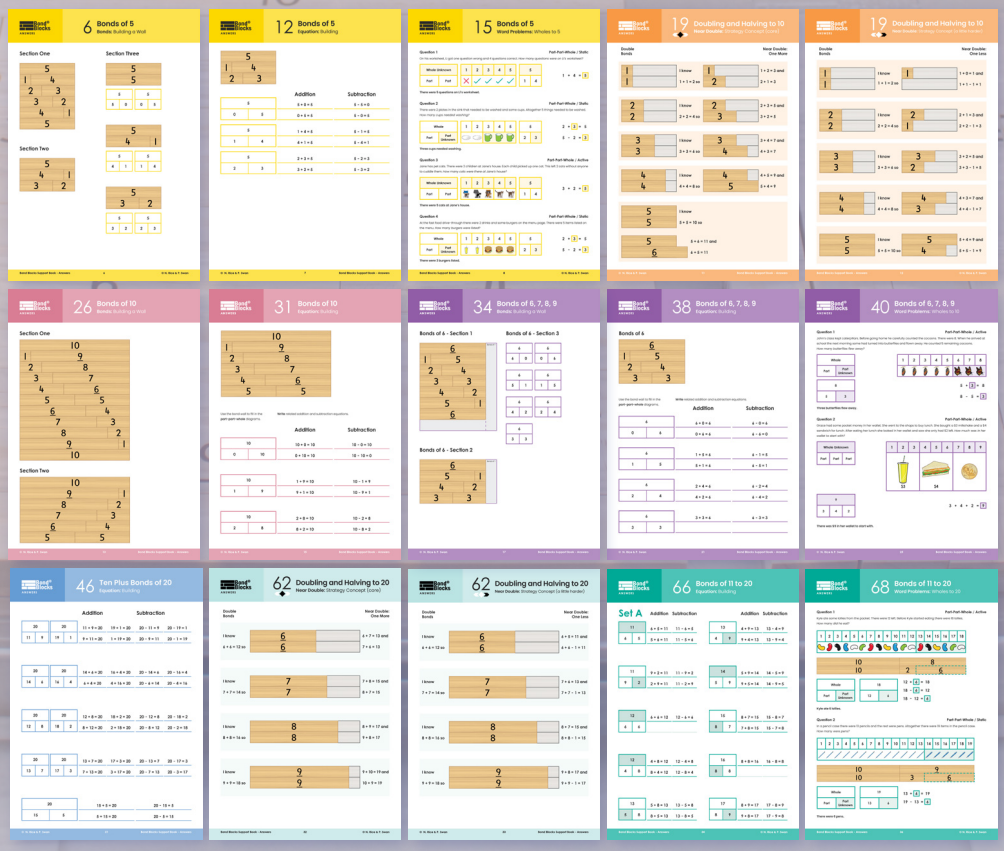
Bond Blocks Support

Bond Blocks Support Book:

Answers

- **6 - Bonds of 5) Bonds:** Building a Wall
- **12 - Bonds of 5) Equation:** Building
- **15 - Bonds of 5) Word Problems:** Wholes to 5
- **19 - Doubling and Halving to 10) Near Double:** Strategy Concept (core)
- **19 - Doubling and Halving to 10) Near Double:** Strategy Concept (a little harder)
- **26 - Bonds of 10) Bonds:** Building a Wall
- **31 - Bonds of 10) Equation:** Building
- **34 - Bonds of 6, 7, 8, 9) Bonds:** Building a Wall
- **38 - Bonds of 6, 7, 8, 9) Equation:** Building
- **40 - Bonds of 6, 7, 8, 9) Word Problems:** Wholes to 10
- **46 - Ten Plus Bonds of 20) Equation:** Building
- **62 - Doubling and Halving to 20) Near Double:** Strategy Concept (core)
- **62 - Doubling and Halving to 20) Near Double:** Strategy Concept (a little harder)
- **66 - Bonds of 11 to 20) Equation:** Building
- **68 - Bonds of 11 to 20) Word Problems:** Wholes to 20



Bond® Blocks

bondblocks.com

drpaulswan.com.au

Narelle Rice
& Dr Paul Swan

Copyright

Bond Blocks Support Book - Answers

First published 2021 (Updated 2023)
Authors: Narelle Rice and Dr Paul Swan
Copyright © A-Z Type
Printed in Australia for A-Z Type
The author may be contacted at: info@bondblocks.com.au
Thank you to Daniel Swan for design.

Reproduction and Communication for educational purposes

A purchasing educational institution and its staff are permitted to make copies or prints of the pages provided that the number of copies or prints does not exceed the number reasonably required by the educational institution to satisfy its teaching purposes, and that;

- Copies are not sold or lent;
- Every copy made clearly shows the footer (© N. Rice & P. Swan).

Rights and Limitations	Printing or photocopying of pages for **personal or class use**.	Printing or photocopying of pages for **wider school use**.	Scanning of / storage of this book on school intranet.	Public sharing or sale of this publication (in part or in full).
Physical Book & eBook	Unlimited copies of these pages is permitted.	Unlimited copies of these pages is permitted.	Unlimited copies of these pages is permitted.	Not permitted.

For details of the CAL licence for educational institutions contact:
Copyright Agency Limited
E-mail: info@copyright.com.au

Thank you for purchasing Bond Blocks.

We hope they help build

Curiosity,
Connections and
Confidence with maths.

- Narelle and Paul.

Contents

About This Book 5

6 - Bonds of 5) Bonds: Building a Wall 6

12 - Bonds of 5) Equation: Building 7

15 - Bonds of 5) Word Problems: Wholes to 5 8

19 - Doubling and Halving to 10) Near Double: Strategy Concept **(core)** 11

19 - Doubling and Halving to 10) Near Double: Strategy Concept **(a little harder)** 12

26 - Bonds of 10) Bonds: Building a Wall 13

31 - Bonds of 10) Equation: Building 15

34 - Bonds of 6, 7, 8, 9) Bonds: Building a Wall 17

38 - Bonds of 6, 7, 8, 9) Equation: Building 21

40 - Bonds of 6, 7, 8, 9) Word Problems: Wholes to 10 25

46 - Ten Plus Bonds of 20) Equation: Building 31

62 - Doubling and Halving to 20) Near Double: Strategy Concept **(core)** 32

62 - Doubling and Halving to 20) Near Double: Strategy Concept **(a little harder)** 33

66 - Bonds of 11 to 20) Equation: Building 34

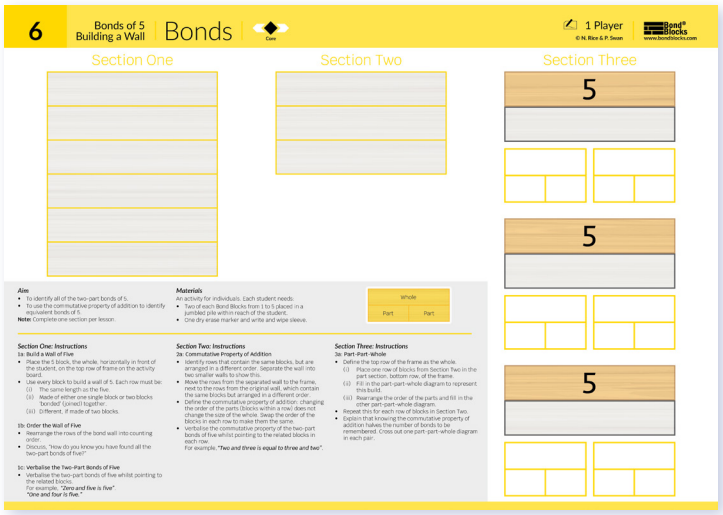
68 - Bonds of 11 to 20) Word Problems: Wholes to 20 36

 © N. Rice & P. Swan

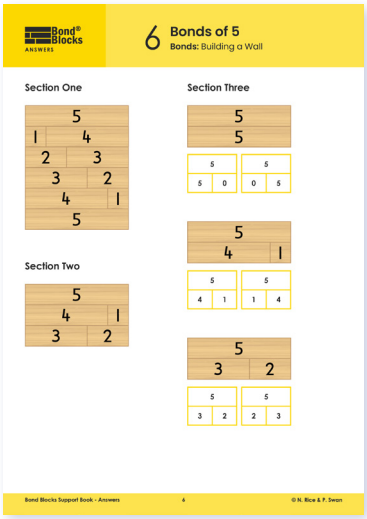
About This Book

Answers for Written Student Responses

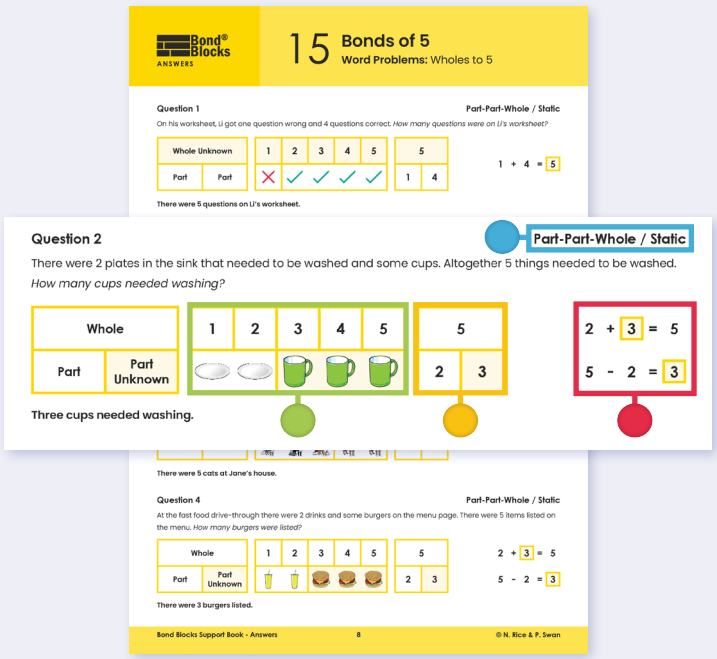
Bond Block activity boards that require a written student response have a corresponding answer sheet to assist with marking. Whilst the activity boards are A3, the answer sheets are in an A4 format for ease of printing. For example, Activity Board 6 and a corresponding answer sheet is shown below.



Activity Board 6
(Bonds of 5: Bonds Building a Wall)



Answers to Section 3
of Activity Board 6



Answers to Activity Board 15
(Bonds of 5: Word Problems Wholes to 5)

Answers for Word Problems

Answers to the word problems have been provided at three levels:

- **Concrete:** solved using objects or drawing that can be counted with one-to-one correspondence.
- **Representational:** in the form of a part-part-whole diagram.
- **Abstract:** in a number sentence.
  Where a problem could be solved using either addition or subtraction, both options are given.

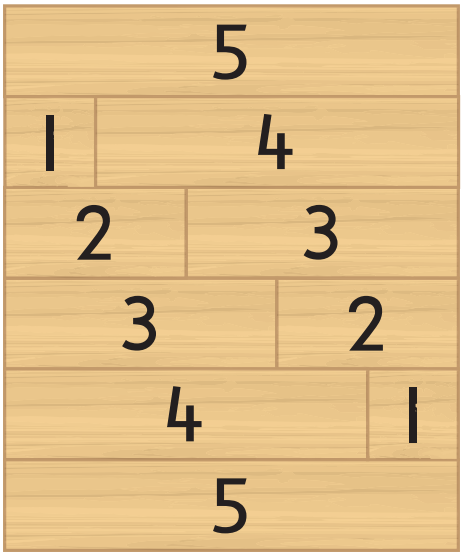
Information relating to the **Teacher Notes: Solving Word Problems.**

Bond® Blocks
ANSWERS

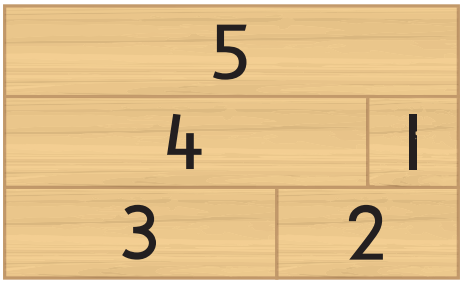
6 Bonds of 5

Bonds: Building a Wall

Section One



Section Two



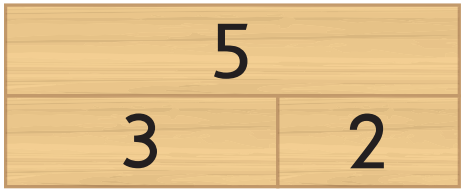
Section Three

5	
5	0

5	
0	5

5	
4	1

5	
1	4



5	
3	2

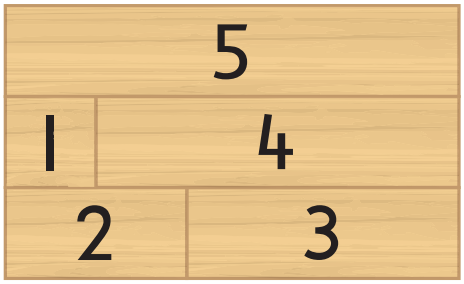
5	
2	3

© N. Rice & P. Swan

Bond® Blocks
ANSWERS

12 Bonds of 5

Equation: Building



	Addition	Subtraction
5	5 + 0 = 5	5 - 5 = 0
0 5	0 + 5 = 5	5 - 0 = 5
5	1 + 4 = 5	5 - 1 = 5
1 4	4 + 1 = 5	5 - 4 = 1
5	2 + 3 = 5	5 - 2 = 3
2 3	3 + 2 = 5	5 - 3 = 2

Bond® Blocks
ANSWERS

15 Bonds of 5

Word Problems: Wholes to 5

Question 1

Part-Part-Whole / Static

On his worksheet, Li got one question wrong and 4 questions correct. *How many questions were on Li's worksheet?*

Whole Unknown	
Part	Part

1	2	3	4	5
✗	✓	✓	✓	✓

5	
1	4

1 + 4 = 5

There were 5 questions on Li's worksheet.

Question 2

Part-Part-Whole / Static

There were 2 plates in the sink that needed to be washed and some cups. Altogether 5 things needed to be washed. *How many cups needed washing?*

Whole	
Part	Part Unknown

1	2	3	4	5

5	
2	3

2 + 3 = 5

5 - 2 = 3

Three cups needed washing.

Question 3

Part-Part-Whole / Active

Jane has pet cats. There were 3 children at Jane's house. Each child picked up one cat. This left 2 cats without anyone to cuddle them. *How many cats were there at Jane's house?*

Whole Unknown	
Part	Part

1	2	3	4	5

5	
3	2

3 + 2 = 5

There were 5 cats at Jane's house.

Question 4

Part-Part-Whole / Static

At the fast food drive-through there were 2 drinks and some burgers on the menu page. There were 5 items listed on the menu. *How many burgers were listed?*

Whole	
Part	Part Unknown

1	2	3	4	5

5	
2	3

2 + 3 = 5

5 - 2 = 3

There were 3 burgers listed.

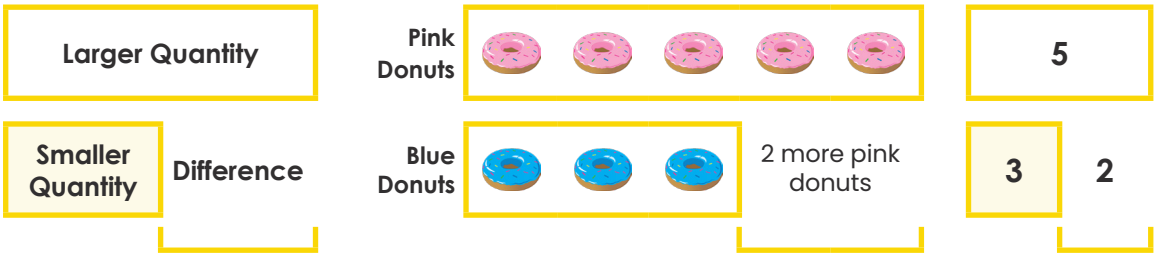
© N. Rice & P. Swan

Question 5

Comparison / Static

There were some blue donuts and 5 pink donuts. There were 2 more pink donuts than blue.

How many blue donuts were there?



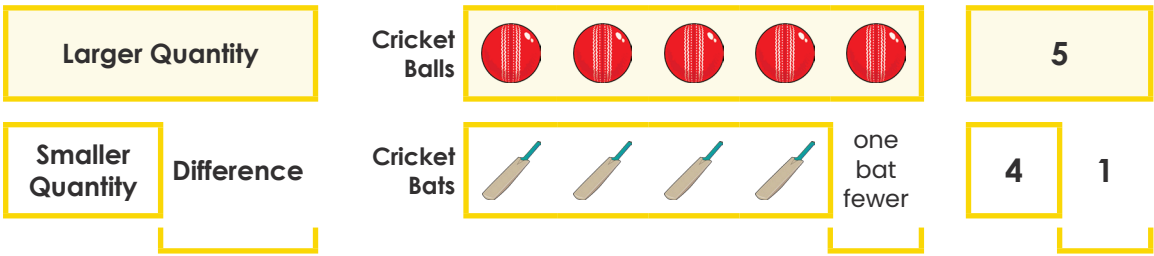
5 - 2 = 3

There were 3 blue donuts.

Question 6

Comparison / Active

The sport teacher was matching one ball to every bat when tidying up. Four bats had a matching ball. There was one bat fewer than balls. *How many balls were there?*



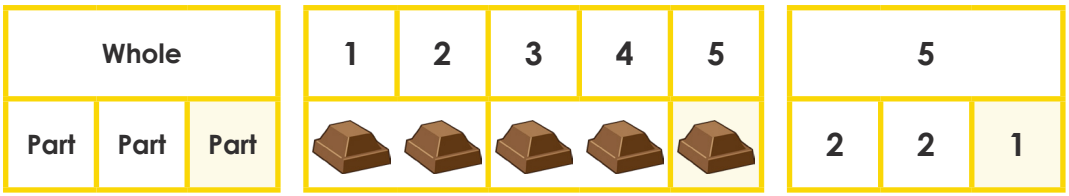
4 + 1 = 5

There were 5 balls.

Question 7

Part-Part-Whole / Active

Chocolate bites come in bags of 5. Josh had one bag in the fridge. *After eating two each day, for two days how many were left in the fridge?*



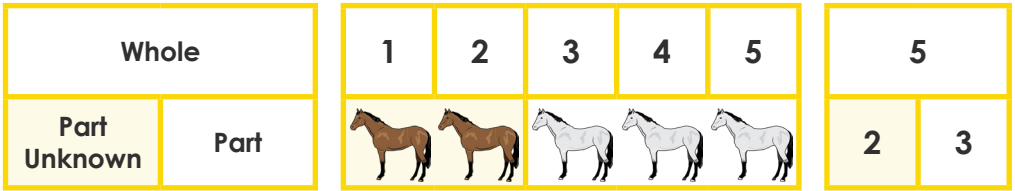
5 - 2 - 2 = 1

There was 1 chocolate bite left in the fridge.

Question 8

Part-Part-Whole / Static

Aisha had 5 toy ponies. Some were brown. The other 3 were white. *How many brown ponies did Aisha have?*



2 + 3 = 5

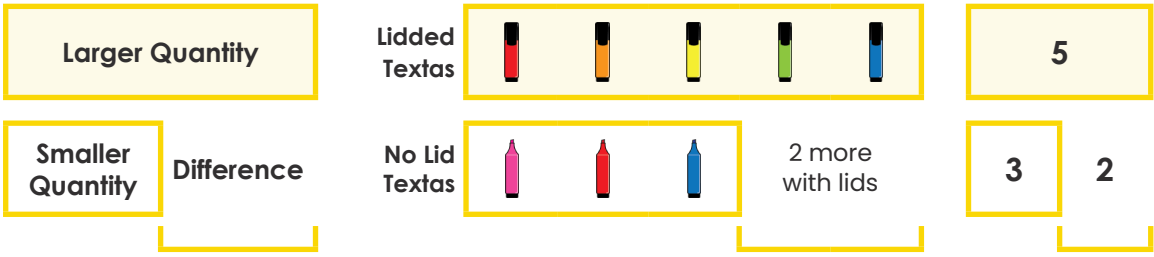
5 - 3 = 2

Aisha had 2 brown ponies.

Question 9

Comparison / Static

Kate was putting away her textas. Three had no lids so were dried out. Kate had two more textas with lids than without. *How many textas did Kate have still with lids?*



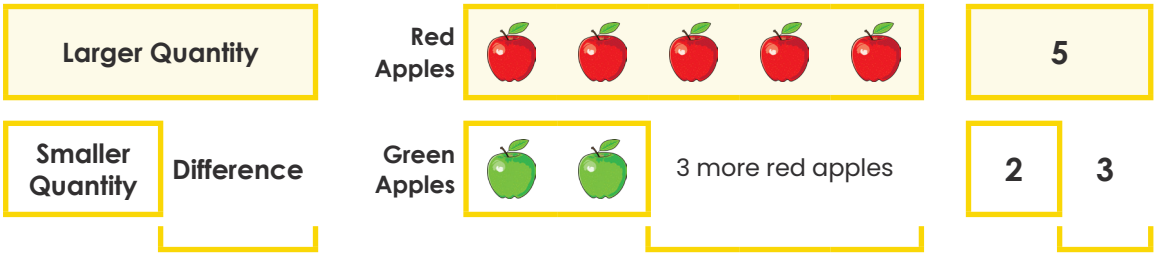
3 + 2 = 5

Kate still has 5 textas with lids.

Question 10

Comparison / Static

In the fruit bowl there were some red apples and 2 green. There was three more red than green. *How many red apples were there?*



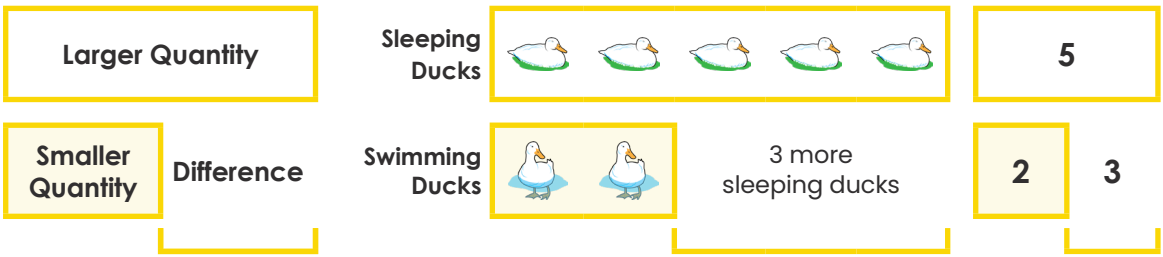
2 + 3 = 5

There were 5 red apples.

Question 11

Comparison / Static

There were some ducks swimming on the lake. There were 5 ducks sleeping on the grass next to the lake. There were 3 more sleeping ducks than swimming ducks. *How many were sleeping on the grass?*



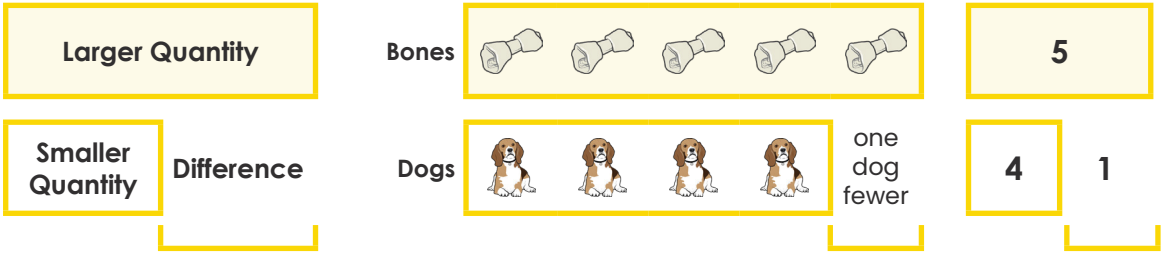
5 - 3 = 2

There were 2 ducks swimming on the lake.

Question 12

Comparison / Active

There were some bones and 4 dogs. Each dog picked up one bone to eat. There was one dog fewer than there were bones. *How many bones were there?*



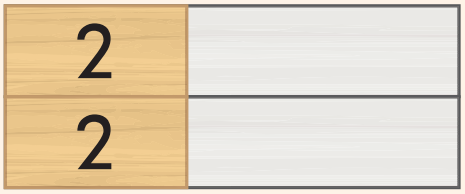
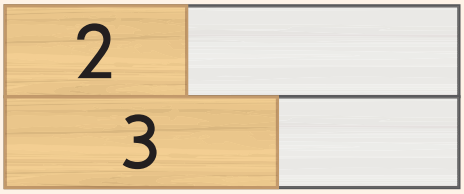
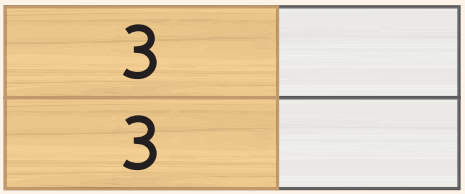
4 + 1 = 5

There were 5 bones.

© N. Rice & P. Swan

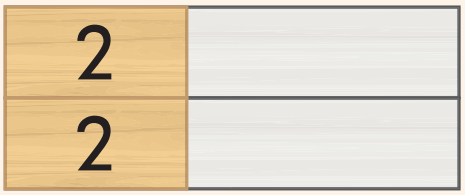
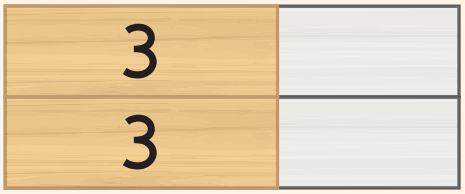
19 Doubling and Halving to 10

Near Double: Strategy Concept (core)

Double Bonds		Near Double: One More	
	I know 1 + 1 = 2 so		1 + 2 = 3 and 2 + 1 = 3
	I know 2 + 2 = 4 so		2 + 3 = 5 and 3 + 2 = 5
	I know 3 + 3 = 6 so		3 + 4 = 7 and 4 + 3 = 7
	I know 4 + 4 = 8 so		4 + 5 = 9 and 5 + 4 = 9
	I know 5 + 5 = 10 so		
	5 + 6 = 11 and 6 + 5 = 11		

19 Doubling and Halving to 10

Near Double: Strategy Concept (a little harder)

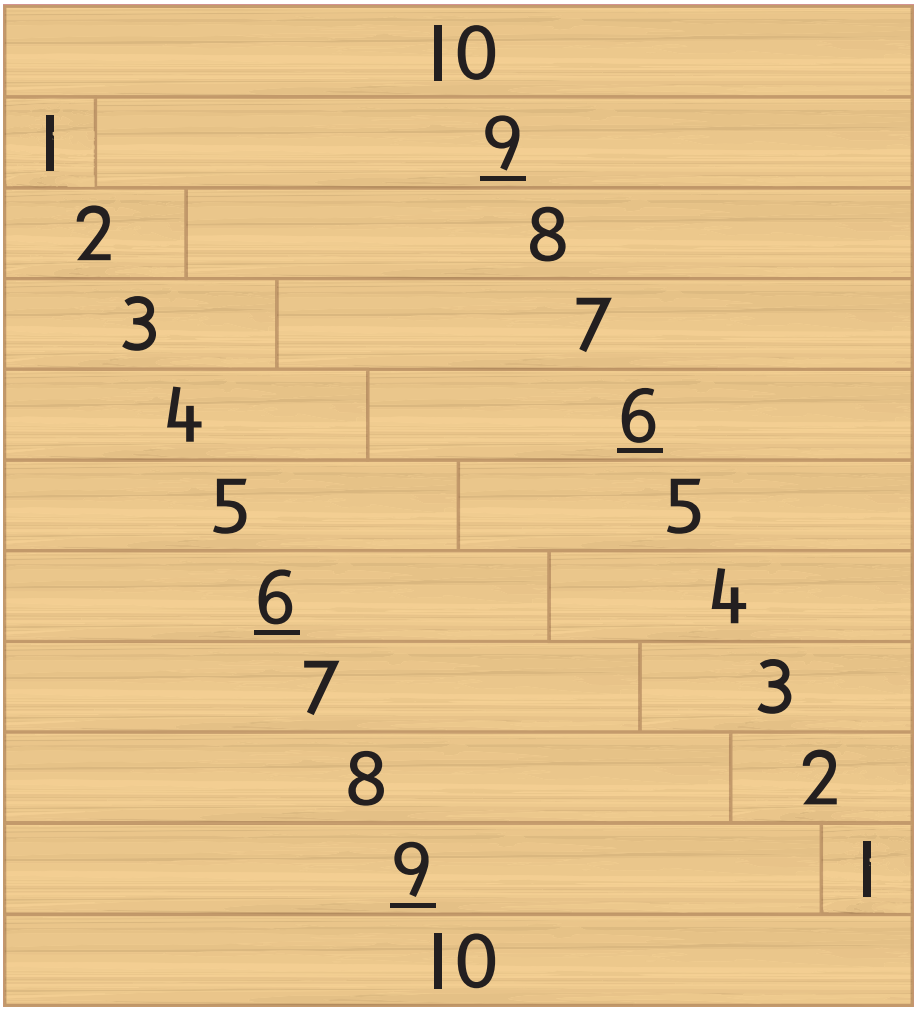
Double Bonds		Near Double: One Less	
	I know 1 + 1 = 2 so		1 + 0 = 1 and 1 + 1 - 1 = 1
	I know 2 + 2 = 4 so		2 + 1 = 3 and 2 + 2 - 1 = 3
	I know 3 + 3 = 6 so		3 + 2 = 5 and 3 + 3 - 1 = 5
	I know 4 + 4 = 8 so		4 + 3 = 7 and 4 + 4 - 1 = 7
	I know 5 + 5 = 10 so		5 + 4 = 9 and 5 + 5 - 1 = 9

© N. Rice & P. Swan

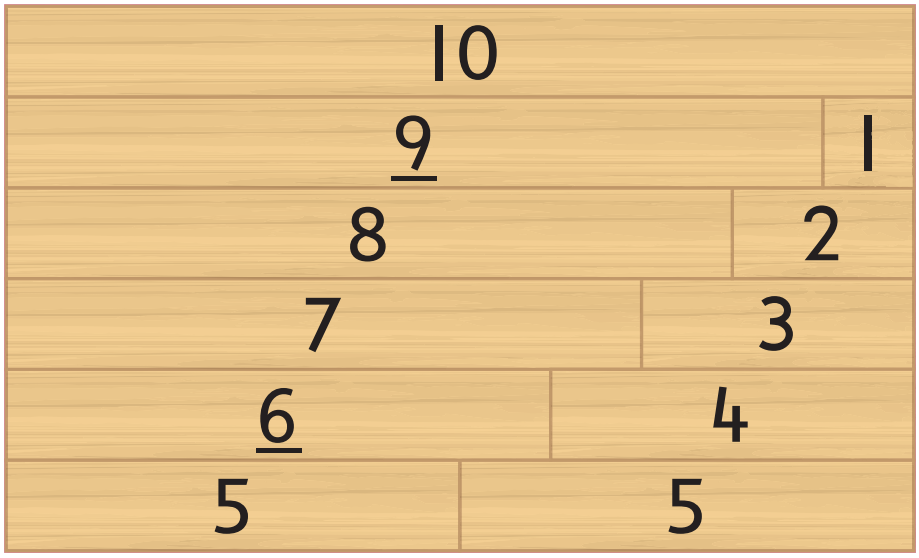
26 Bonds of 10

Bonds: Building a Wall

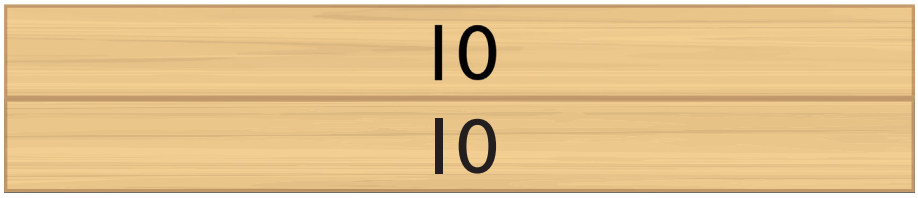
Section One



Section Two

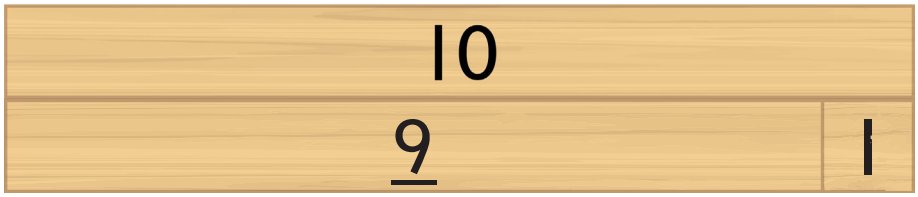


Section Three



10	
10	0

10	
0	10



10	
9	1

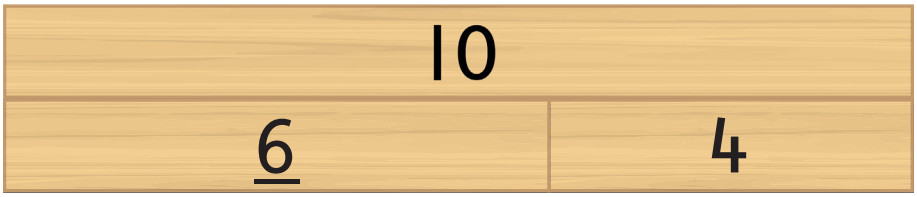
10	
1	9

10	
8	2

10	
2	8

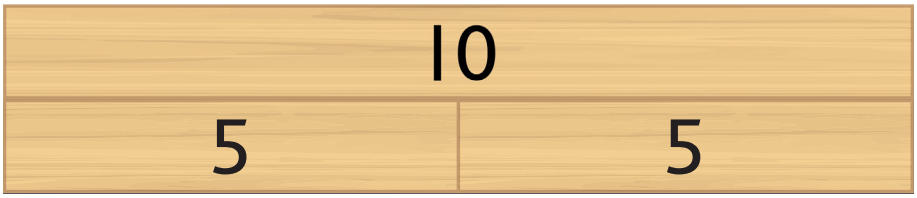
10	
7	3

10	
3	7



10	
6	4

10	
4	6

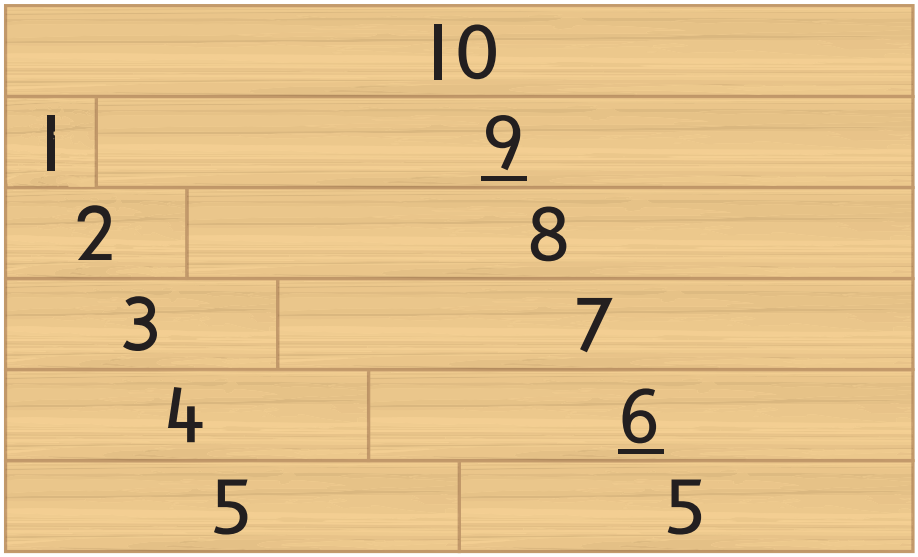


10	
5	5

© N. Rice & P. Swan

31 Bonds of 10

Equation: Building



Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

		Addition	Subtraction
10			
0	10	10 + 0 = 10	10 - 0 = 10
		0 + 10 = 10	10 - 10 = 0
10			
1	9	1 + 9 = 10	10 - 1 = 9
		9 + 1 = 10	10 - 9 = 1
10			
2	8	2 + 8 = 10	10 - 2 = 8
		8 + 2 = 10	10 - 8 = 2

Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

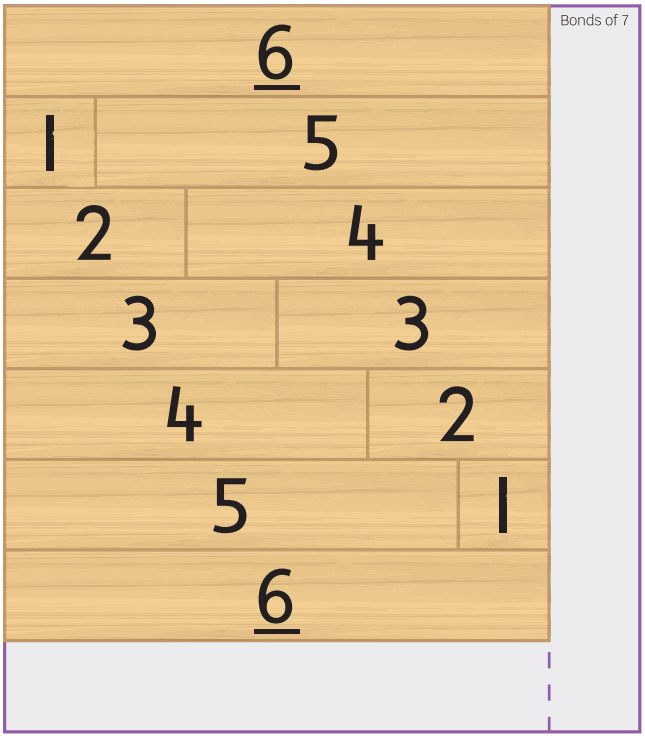
	Addition	Subtraction
10 3 | 7	3 + 7 = 10 7 + 3 = 10	10 - 3 = 7 10 - 7 = 3
10 4 | 6	4 + 6 = 10 6 + 4 = 10	10 - 4 = 6 10 - 4 = 6
10 5 | 5	5 + 5 = 10	10 - 5 = 5

© N. Rice & P. Swan

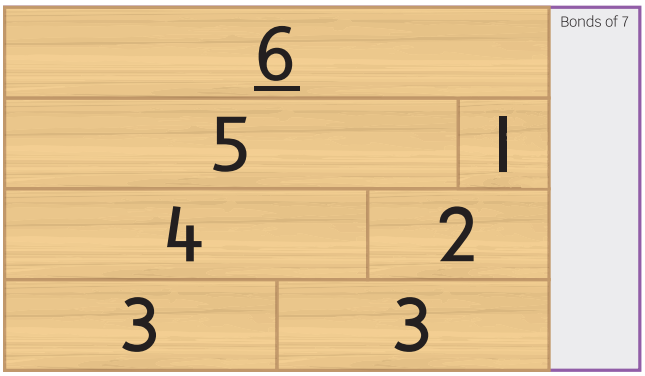
34 Bonds of 6, 7, 8, 9

Bonds: Building a Wall

Bonds of 6 - Section 1



Bonds of 6 - Section 2



Bonds of 6 - Section 3

6	
6	0

6	
0	6

6	
5	1

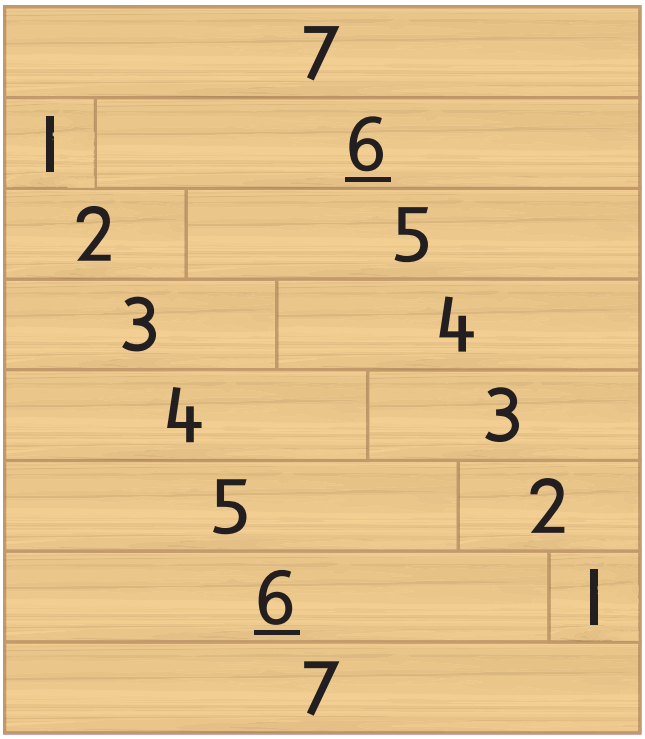
6	
1	5

6	
4	2

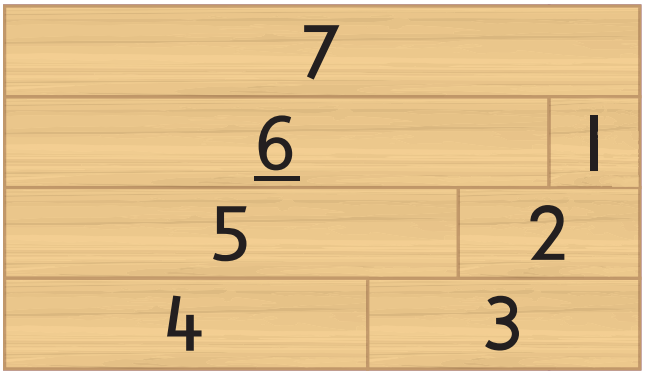
6	
2	4

6	
3	3

Bonds of 7 - Section 1



Bonds of 7 - Section 2



Bonds of 7 - Section 3

7	
7	0

7	
0	7

7	
6	1

7	
1	6

7	
5	2

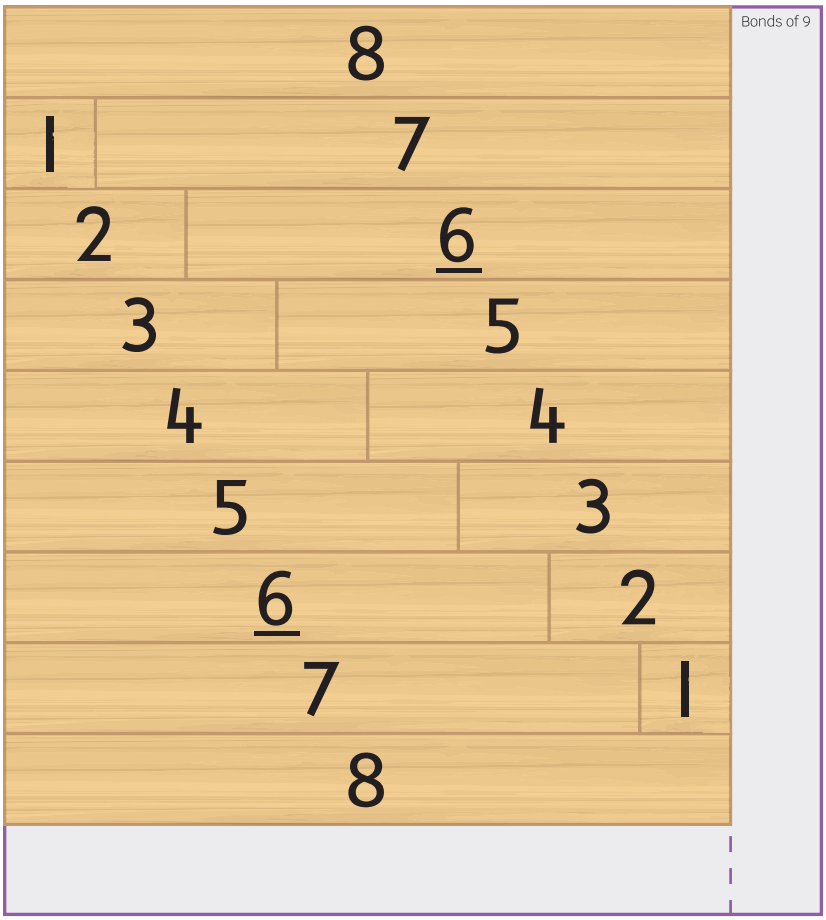
7	
2	5

7	
4	3

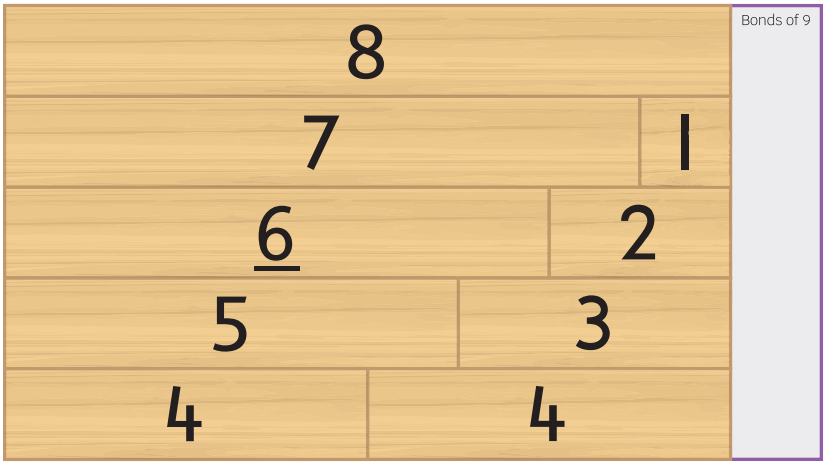
7	
3	4

© N. Rice & P. Swan

Bonds of 8 - Section 1



Bonds of 8 - Section 2



Bonds of 8 - Section 3

8	
8	0

8	
0	8

8	
7	1

8	
1	7

8	
6	2

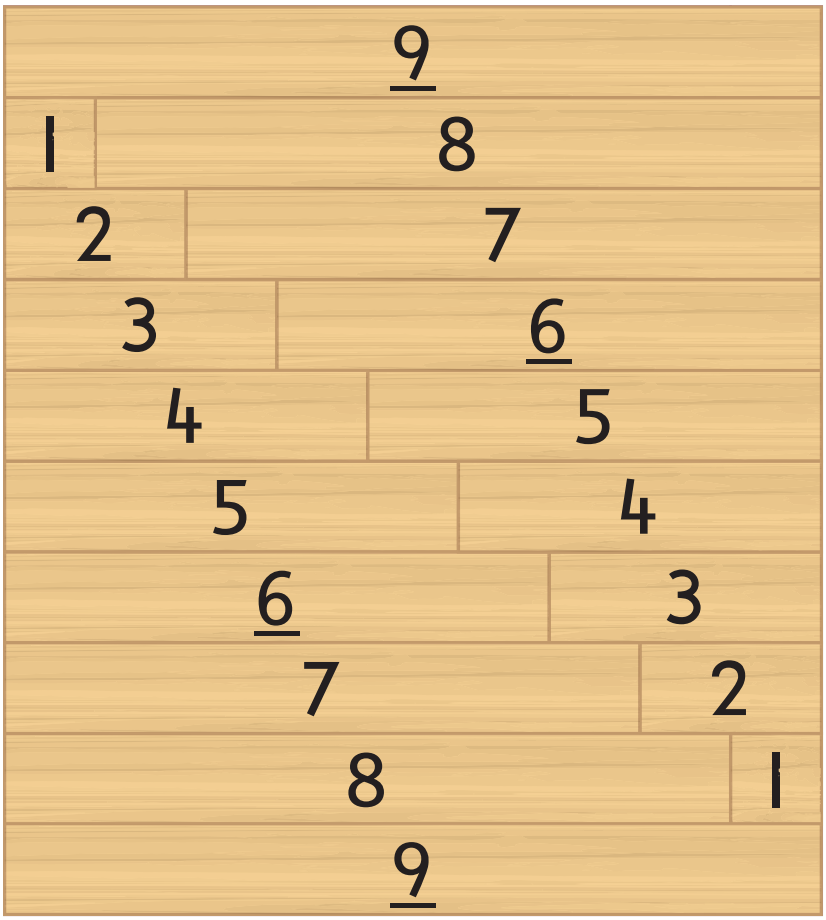
8	
2	6

8	
5	3

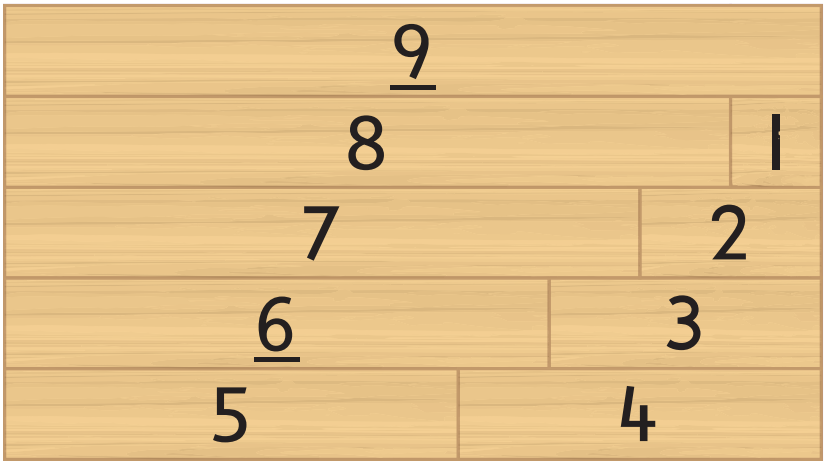
8	
3	5

8	
4	4

Bonds of 9 - Section 1



Bonds of 9 - Section 2



Bonds of 9 - Section 3

9	
9	0

9	
0	9

9	
8	1

9	
1	8

9	
7	2

9	
2	7

9	
6	3

9	
3	6

9	
5	4

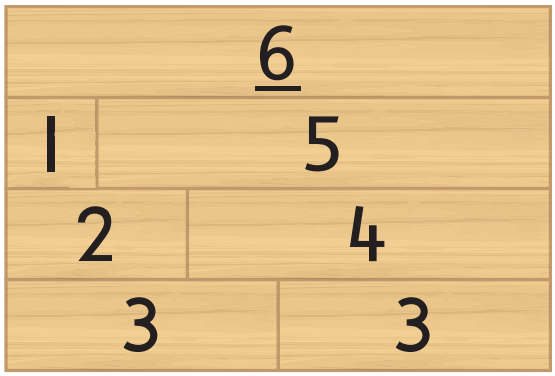
9	
4	5

© N. Rice & P. Swan

38 Bonds of 6, 7, 8, 9

Equation: Building

Bonds of 6

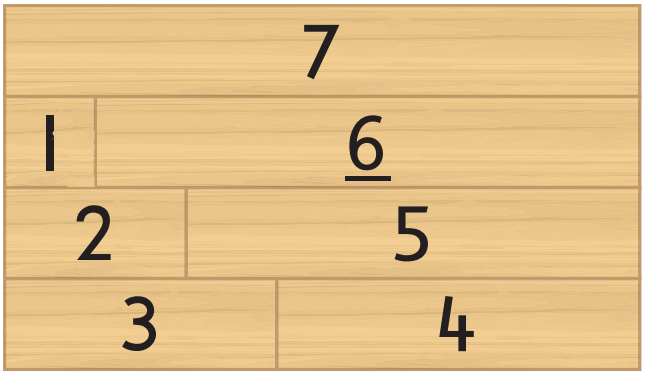


Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

		Addition	Subtraction
6		6 + 0 = 6	6 - 0 = 6
0	6	0 + 6 = 6	6 - 6 = 0
6		1 + 5 = 6	6 - 1 = 5
1	5	5 + 1 = 6	6 - 5 = 1
6		2 + 4 = 6	6 - 2 = 4
2	4	4 + 2 = 6	6 - 4 = 2
6		3 + 3 = 6	6 - 3 = 3
3	3		

Bonds of 7



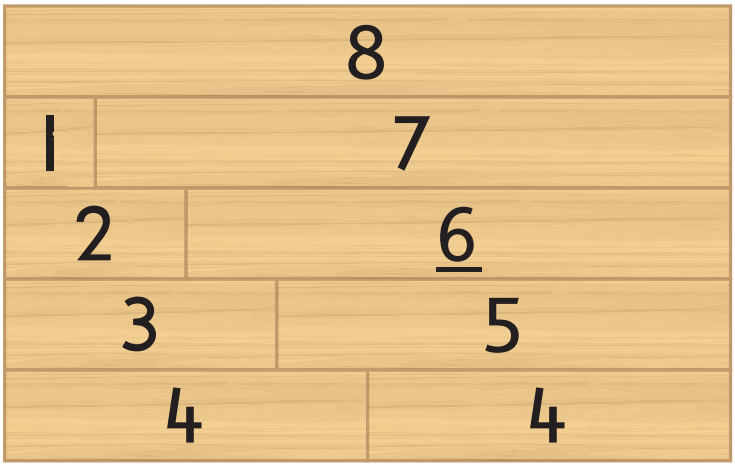
Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

	Addition	Subtraction
7 / 0 | 7	7 + 0 = 7 0 + 7 = 7	7 - 0 = 7 7 - 7 = 0
7 / 1 | 6	1 + 6 = 7 6 + 1 = 7	7 - 1 = 6 7 - 6 = 1
7 / 2 | 5	2 + 5 = 7 5 + 2 = 7	7 - 2 = 5 7 - 5 = 2
7 / 3 | 4	3 + 4 = 7 4 + 3 = 7	7 - 3 = 4 7 - 4 = 3

© N. Rice & P. Swan

Bonds of 8

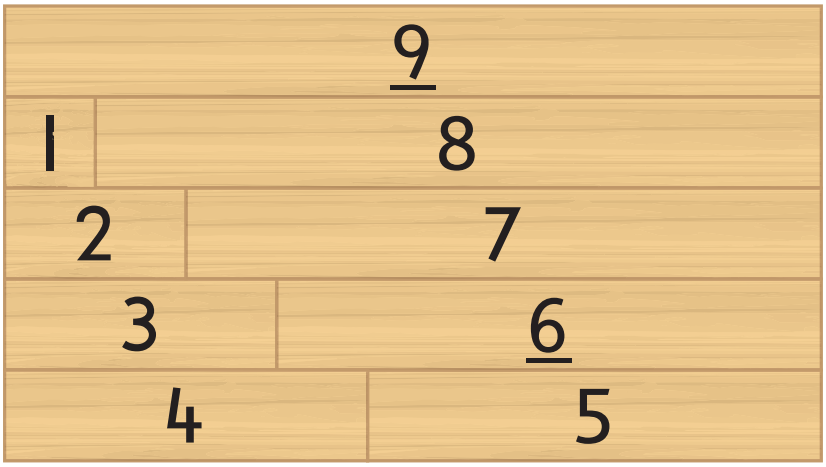


Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

	Addition	Subtraction
8 0 8	8 + 0 = 8 0 + 8 = 8	8 - 0 = 8 8 - 8 = 0
8 1 7	1 + 7 = 8 7 + 1 = 8	8 - 1 = 7 8 - 7 = 1
8 2 6	2 + 6 = 8 6 + 2 = 8	8 - 2 = 6 8 - 6 = 2
8 3 5	3 + 5 = 8 5 + 3 = 8	8 - 3 = 5 8 - 5 = 3
8 4 4	4 + 4 = 8	8 - 4 = 4

Bonds of 9



Use the bond wall to fill in the **part-part-whole** diagrams.

Write related addition and subtraction equations.

		Addition	Subtraction
9		9 + 0 = 9	9 - 0 = 9
0	9	0 + 9 = 9	9 - 9 = 0
9		1 + 8 = 9	9 - 1 = 8
1	8	8 + 1 = 9	9 - 8 = 1
9		2 + 7 = 9	9 - 2 = 7
2	7	7 + 2 = 9	9 - 7 = 2
9		3 + 6 = 9	9 - 3 = 6
3	6	6 + 3 = 9	9 - 6 = 3
9		4 + 5 = 9	9 - 4 = 5
4	5	5 + 4 = 9	9 - 5 = 4

© N. Rice & P. Swan

40 Bonds of 6, 7, 8, 9

Word Problems: Wholes to 10

Question 1

Part-Part-Whole / Active

John's class kept caterpillars. Before going home he carefully counted the cocoons. There were 8. When he arrived at school the next morning some had turned into butterflies and flown away. He counted 5 remaining cocoons.
How many butterflies flew away?

Whole	
Part	Part Unknown

8	
5	3

1	2	3	4	5	6	7	8

5 + 3 = 8

8 - 5 = 3

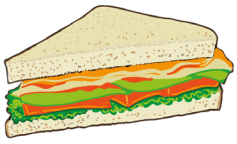
Three butterflies flew away.

Question 2

Part-Part-Whole / Active

Grace had some pocket money in her wallet. She went to the shops to buy lunch. She bought a $3 milkshake and a $4 sandwich for lunch. After eating her lunch she looked in her wallet and saw she only had $2 left. *How much was in her wallet to start with?*

Whole Unknown		
Part	Part	Part

1	2	3	4	5	6	7	8	9
$3			 $4					

9		
3	4	2

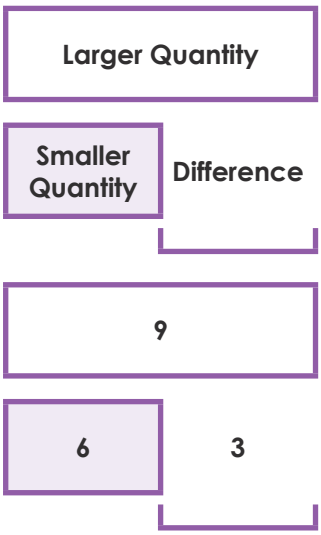
3 + 4 + 2 = 9

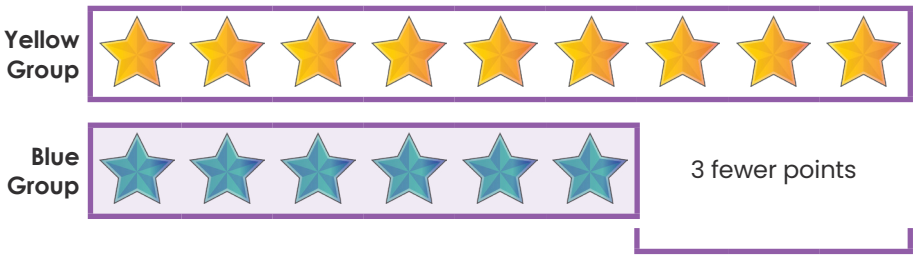
There was $9 in her wallet to start with.

Question 3

Comparison / Static

When students in Miss Star's class followed instructions she gave them group points. The blue group had 3 fewer points than the winning yellow group. The yellow group won with 9 points. *How many points did the blue team score?*





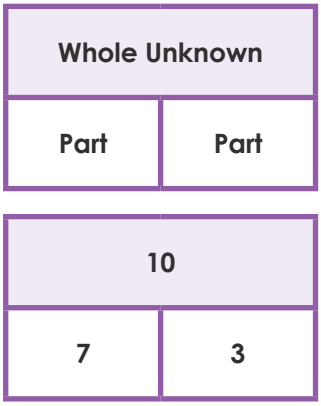
9 - 3 = 6

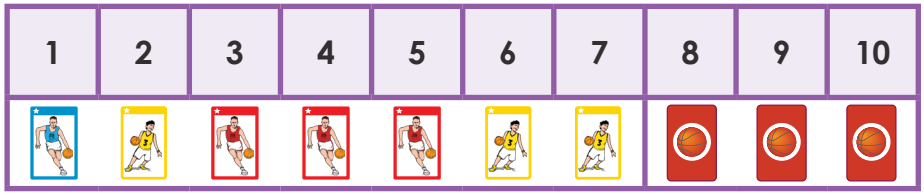
The blue team scored 6 points.

Question 4

Part-Part-Whole / Active

Chung's Dad gave him some packets of collector cards. Each packet had one card inside. He had opened 7 packets and had 3 packets still to open. *How many packets did his dad give him?*





7 + 3 = 10

His dad gave him 10 packets.

© N. Rice & P. Swan

Question 5

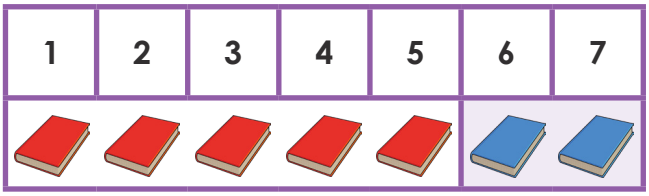
Part-Part-Whole / Static

Yassmine is at her local library. Each person is allowed to borrow 7 books. She has 5 books on loan at home.

How many can she borrow today?

Whole	
Part	Part Unknown

7	
5	2



5 + 2 = 7

7 - 5 = 2

Yassmine can borrow 2 books today.

Question 6

Comparison / Active and Part-Part-Whole / Static

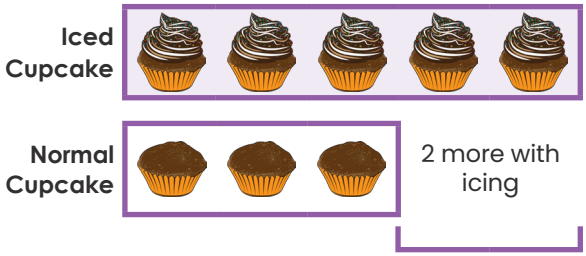
Kaitlyn cooked cupcakes. She iced some but ran out of icing. There were 3 cupcakes left without icing. She counted the iced cupcakes and found she had two more with icing than those without. *How many cupcakes did she cook?*

Step 1:

Comparison / Active

Larger Quantity	
Smaller Quantity	Difference

5	
3	2



3 + 2 = 5

Kaitlyn iced 5 cupcakes.

Step 2:

Part-Part-Whole / Static

Whole Unknown	
Part	Part

8	
5	3

5 + 3 = 8

Kaitlyn cooked 8 cupcakes.

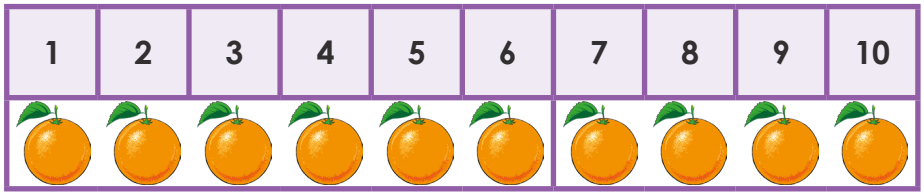
Question 7

Part-Part-Whole / Active

There was a bag full of oranges. Six were squeezed to make juice. This left 4 oranges in the bag. *How many were in the bag to start with?*

Whole Unknown	
Part	Part

10	
6	4



6 + 4 = 10

There were 10 oranges in the bag to start with.

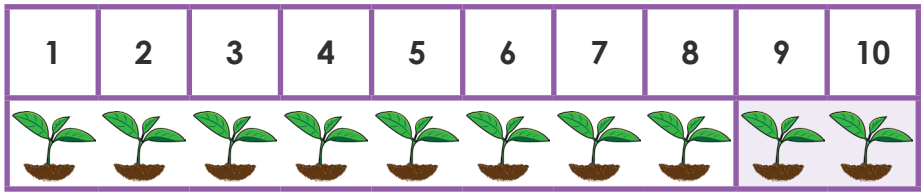
Question 8

Part-Part-Whole / Active

Abdalla planted 10 seedlings in his garden but it rained overnight and the snails ate some. The next morning he only had 8 seedlings left. *How many seedlings did the snails eat?*

Whole	
Part	Part Unknown

10	
8	2



8 + 2 = 10

10 - 8 = 2

The snails ate 2 seedlings.

Question 9

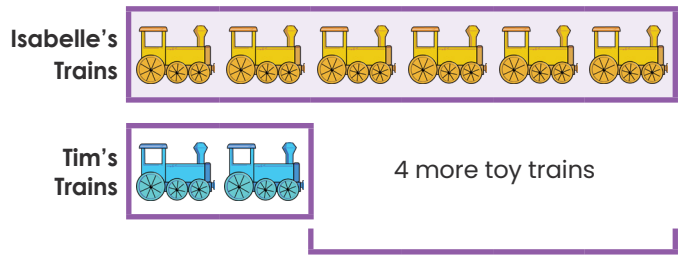
Comparison / Static and Part-Part-Whole / Active

Tim had 2 battery operated toy trains. His friend Isabelle had 4 more than him. Tim went to play at Isabelle's house and took his trains. *How many trains did they have to play with together?*

Step 1:

Comparison / Static

Larger Quantity	
Smaller Quantity	Difference



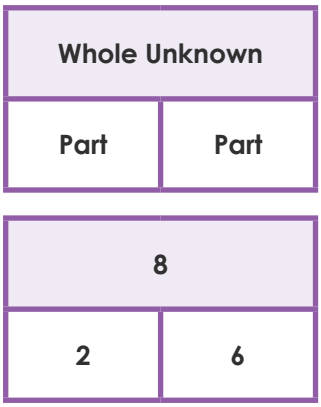
6	
2	4

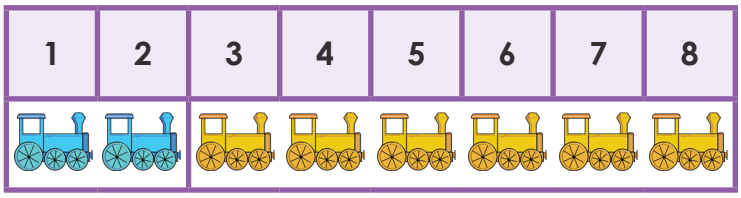
2 + 4 = 6

Isabelle had 6 battery operated toy trains.

© N. Rice & P. Swan

Step 2: *Part-Part-Whole / Active*





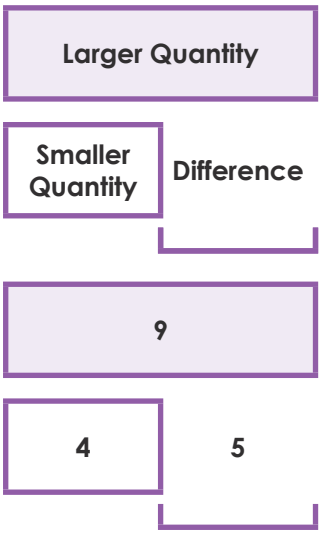
2 + 6 = 8

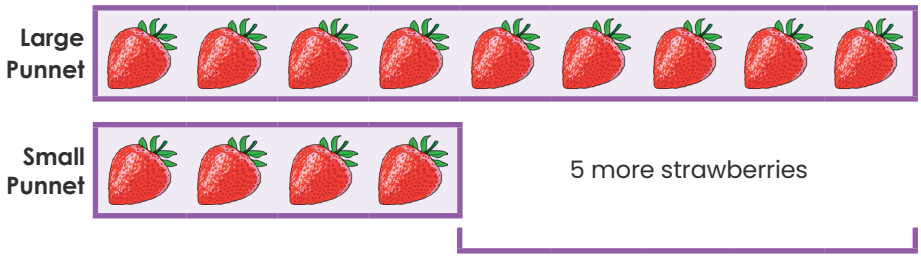
Tim and Isabelle had 8 trains to play with together.

Question 10

Comparison / Active

Louisa's mum bought two punnets of strawberries. One large punnet and one small one. The large one had 5 more strawberries than the small one. Louisa ate the whole small punnet of 4 strawberries. *How many strawberries are in the large punnet?*





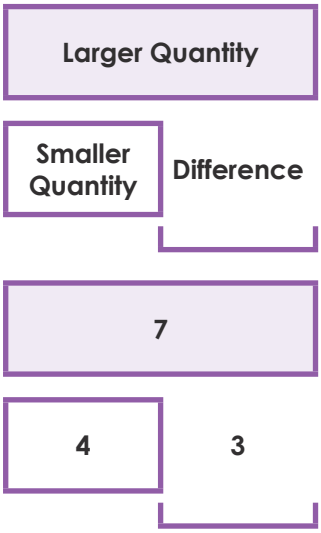
4 + 5 = 9

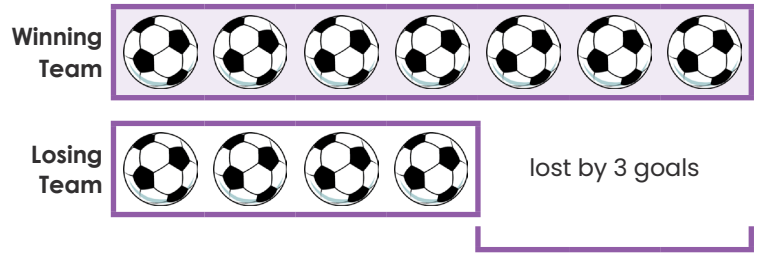
There were 9 strawberries in the large punnet.

Question 11

Comparison / Active

During sport the class was split into two teams and played each other in a game of football. The losing team scored 4 goals and lost by 3. *How many goals did the winning team score?*





4 + 3 = 7

The winning team scored 7 goals.

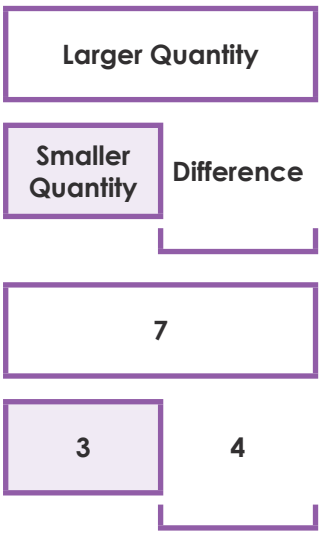
Question 12

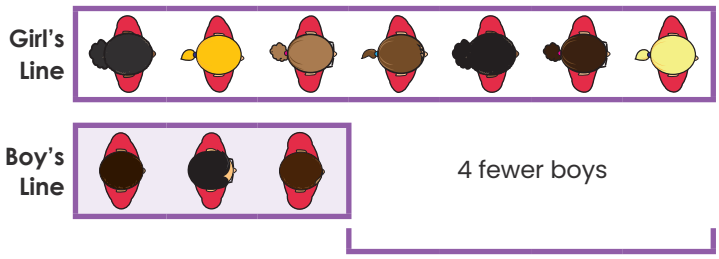
Comparison / Static and Part-Part-Whole / Static

After lunch the children from Miss Tayla's room line up in two lines. One line of girls and one line of boys, standing next to each other in pairs. The boys' line has 4 fewer children than the girls' line which has 7 girls. *How many children are in Miss Tayla's class?*

Step 1: Calculate the number of boys.

Comparison / Static



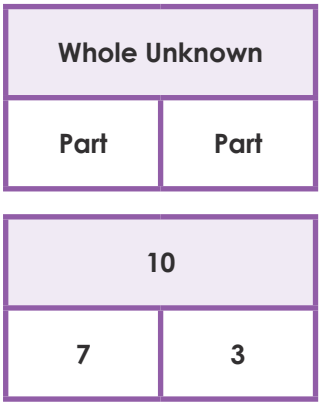


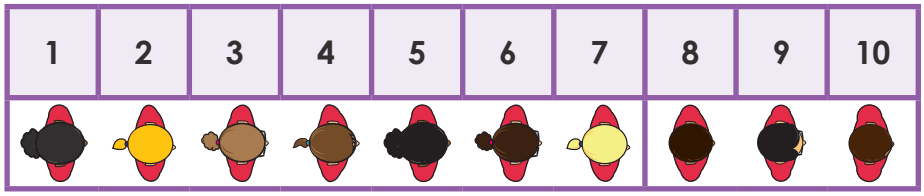
7 - 4 = 3

There are 3 boys in Miss Tayla's class.

Step 2: Calculate the number of children.

Part-Part-Whole / Static





7 + 3 = 10

There are 10 children in Miss Tayla's class.

© N. Rice & P. Swan

Bond® Blocks
ANSWERS

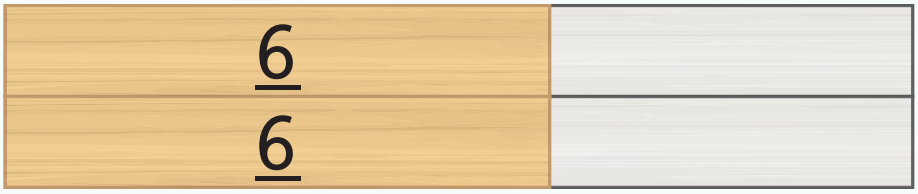
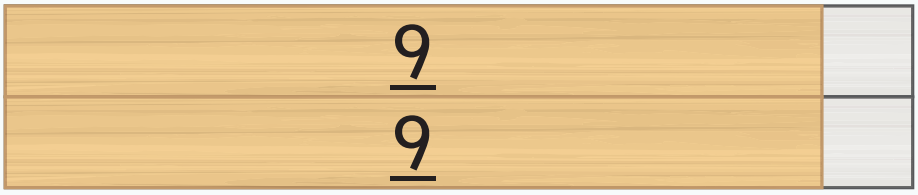
46 Ten Plus Bonds of 20

Equation: Building

		Addition		Subtraction	
20	20	11 + 9 = 20	19 + 1 = 20	20 - 11 = 9	20 - 19 = 1
11 | 9	19 | 1	9 + 11 = 20	1 + 19 = 20	20 - 9 = 11	20 - 1 = 19
20	20	14 + 6 = 20	16 + 4 = 20	20 - 14 = 6	20 - 16 = 4
14 | 6	16 | 4	6 + 4 = 20	4 + 16 = 20	20 - 6 = 14	20 - 4 = 16
20	20	12 + 8 = 20	18 + 2 = 20	20 - 12 = 8	20 - 18 = 2
12 | 8	18 | 2	8 + 12 = 20	2 + 18 = 20	20 - 8 = 12	20 - 2 = 18
20	20	13 + 7 = 20	17 + 3 = 20	20 - 13 = 7	20 - 17 = 3
13 | 7	17 | 3	7 + 13 = 20	3 + 17 = 20	20 - 7 = 13	20 - 3 = 17
20		15 + 5 = 20		20 - 15 = 5	
15 | 5		5 + 15 = 20		20 - 5 = 15	

62 Doubling and Halving to 20

Near Double: Strategy Concept (core)

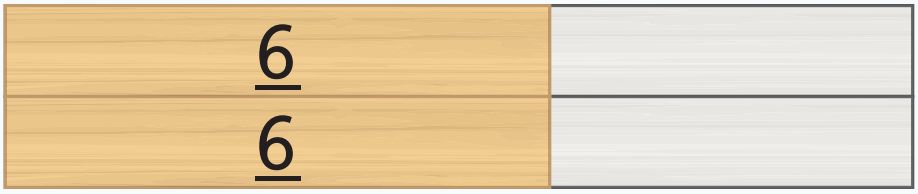
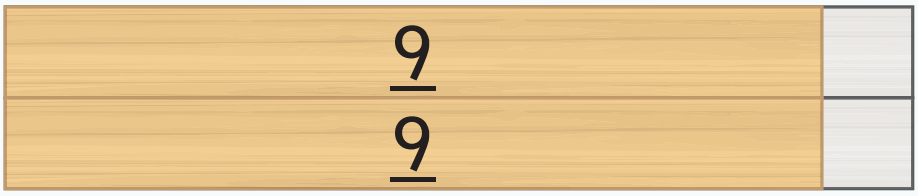
Double Bonds		Near Double: One More
I know 6 + 6 = 12 so		6 + 7 = 13 and 7 + 6 = 13
I know 7 + 7 = 14 so		7 + 8 = 15 and 8 + 7 = 15
I know 8 + 8 = 16 so		8 + 9 = 17 and 9 + 8 = 17
I know 9 + 9 = 18 so		9 + 10 = 19 and 10 + 9 = 19

© N. Rice & P. Swan

Bond® Blocks
ANSWERS

62 Doubling and Halving to 20

Near Double: Strategy Concept (a little harder)

Double Bonds		Near Double: One Less
I know		6 + 5 = 11 and
6 + 6 = 12 so		6 + 6 - 1 = 11
I know		7 + 6 = 13 and
7 + 7 = 14 so		7 + 7 - 1 = 13
I know		8 + 7 = 15 and
8 + 8 = 16 so		8 + 8 - 1 = 15
I know		9 + 8 = 17 and
9 + 9 = 18 so		9 + 9 - 1 = 17

Bond® Blocks
ANSWERS

66 Bonds of 11 to 20

Equation: Building

Set A

	Addition	Subtraction
11 / 6 5	6 + 5 = 11	11 - 6 = 5
	5 + 6 = 11	11 - 5 = 6
11 / 9 2	9 + 2 = 11	11 - 9 = 2
	2 + 9 = 11	11 - 2 = 9
12 / 6 6	6 + 6 = 12	12 - 6 = 6
12 / 4 8	4 + 8 = 12	12 - 4 = 8
	8 + 4 = 12	12 - 8 = 4
13 / 5 8	5 + 8 = 13	13 - 5 = 8
	8 + 5 = 13	13 - 8 = 5

	Addition	Subtraction
13 / 4 9	4 + 9 = 13	13 - 4 = 9
	9 + 4 = 13	13 - 9 = 4
14 / 5 9	5 + 9 = 14	14 - 5 = 9
	9 + 5 = 14	14 - 9 = 5
15 / 8 7	8 + 7 = 15	15 - 8 = 7
	7 + 8 = 15	15 - 7 = 8
16 / 8 8	8 + 8 = 16	16 - 8 = 8
17 / 8 9	8 + 9 = 17	17 - 8 = 9
	9 + 8 = 17	17 - 9 = 8

© N. Rice & P. Swan

Set B

		Addition	Subtraction
15		6 + 9 = 15	15 - 6 = 9
6	9	9 + 6 = 15	15 - 9 = 6

		Addition	Subtraction
12		3 + 9 = 12	12 - 3 = 9
3	9	9 + 3 = 12	12 - 9 = 3

12		7 + 5 = 12	12 - 7 = 5
7	5	5 + 7 = 12	12 - 5 = 7

13		6 + 7 = 13	13 - 6 = 7
6	7	7 + 6 = 13	13 - 7 = 6

14		6 + 8 = 14	14 - 6 = 8
6	8	8 + 6 = 14	14 - 8 = 6

16		9 + 7 = 16	16 - 9 = 7
9	7	7 + 9 = 16	16 - 7 = 9

11		8 + 3 = 11	11 - 8 = 3
8	3	3 + 8 = 11	11 - 3 = 8

18		9 + 9 = 18	18 - 9 = 9
9	9		

14		7 + 7 = 14	14 - 7 = 7
7	7		

11		7 + 4 = 11	11 - 7 = 4
7	4	4 + 7 = 11	11 - 4 = 7

Bond® Blocks
ANSWERS

68 Bonds of 11 to 20

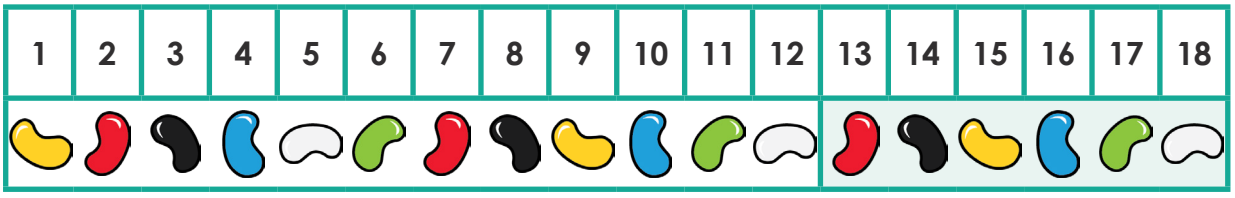
Word Problems: Wholes to 20

Question 1

Part-Part-Whole / Active

Kyle ate some lollies from the packet. There were 12 left. Before Kyle started eating there were 18 lollies.

How many did he eat?



Whole	
Part	Part Unknown

18	
12	6

12 + 6 = 18

18 - 6 = 12

18 - 12 = 6

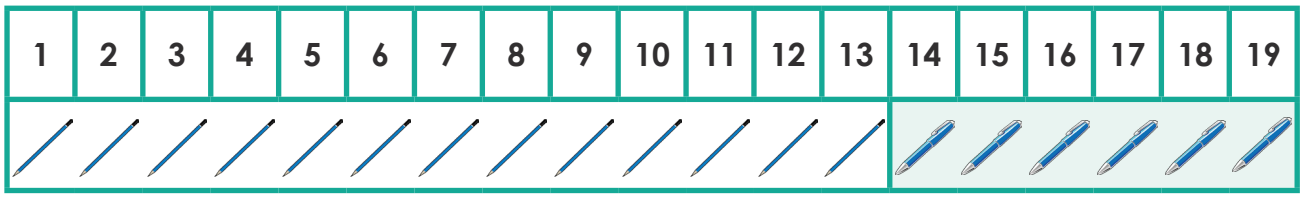
Kyle ate 6 lollies.

Question 2

Part-Part-Whole / Static

In a pencil case there were 13 pencils and the rest were pens. Altogether there were 19 items in the pencil case.

How many were pens?



Whole	
Part	Part Unknown

19	
13	6

13 + 6 = 19

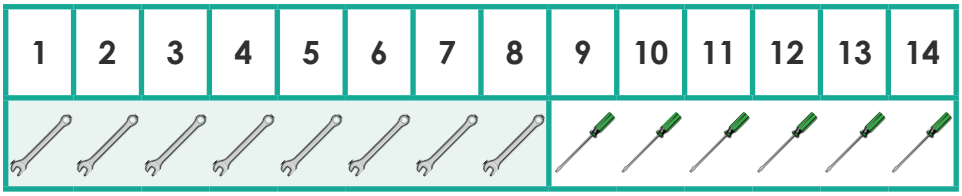
19 - 13 = 6

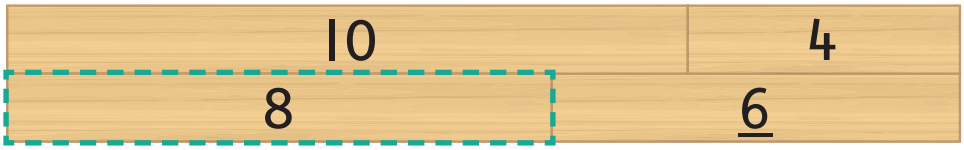
There were 6 pens.

© N. Rice & P. Swan

Question 3 *Part-Part-Whole / Static*

Dad had some spanners in his toolbox and 6 screwdrivers. This made 14 tools altogether. *How many screwdrivers did he have?*





Whole	
Part Unknown	Part

14	
8	6

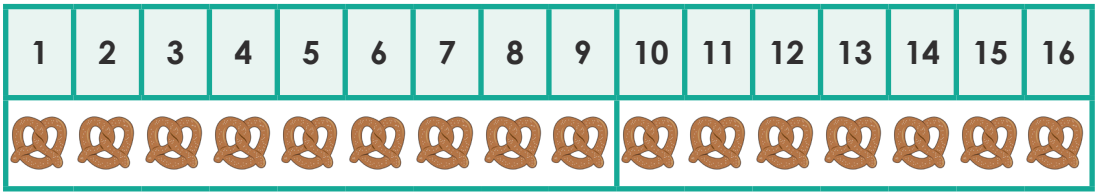
6 + 8 = 14

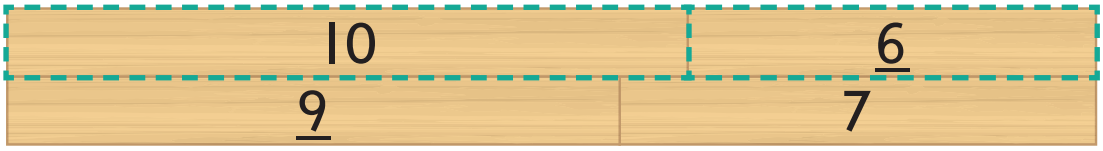
14 - 6 = 8

Dad had 8 spanners.

Question 4 **Part-Part-Whole / Active**

Mum bought a packet of pretzels for her children to eat after school. After the children had eaten 7 there were 9 left in the packet. *How many were there in the packet to start?*





Whole Unknown	
Part	Part

16	
9	7

9 + 7 = 16

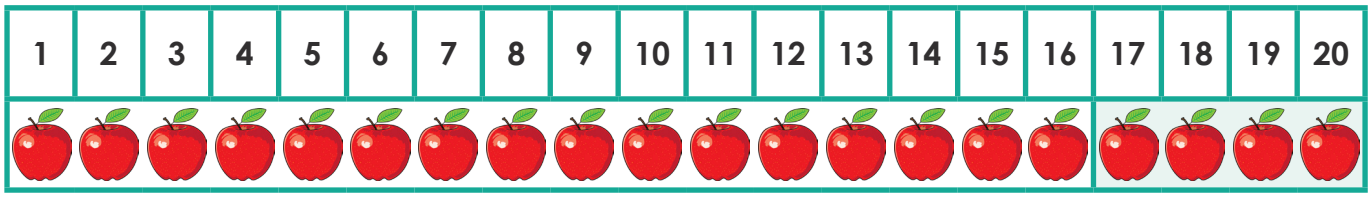
There were 16 pretzels in the packet to start with.

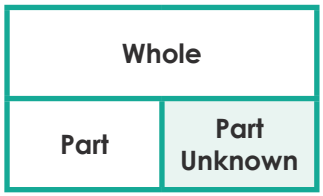
Question 5

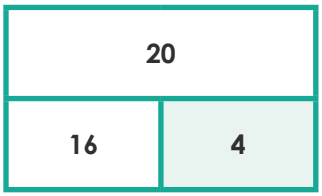
Part-Part-Whole /Active

There were 20 apples on an apple tree. The farmer picked the ripest. This left 16 on the tree.

How many did the farmer pick?







16 + 4 = 20

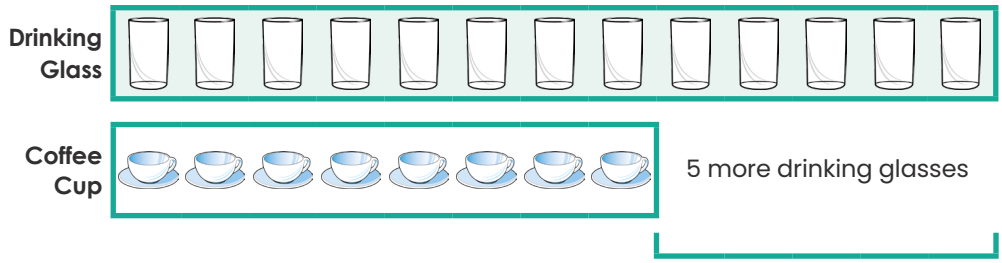
20 - 16 = 4

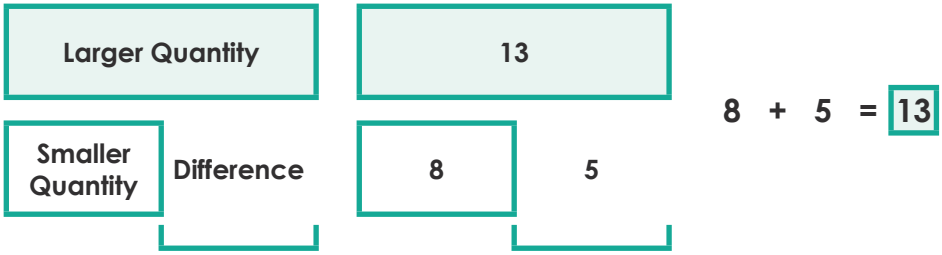
The farmer picked 4 apples.

Question 6

Comparison / Static

In the dishwasher there were some drinking glasses and 8 coffee cups. There were 5 more drinking glasses than coffee cups. *How many drinking glasses were there?*





8 + 5 = 13

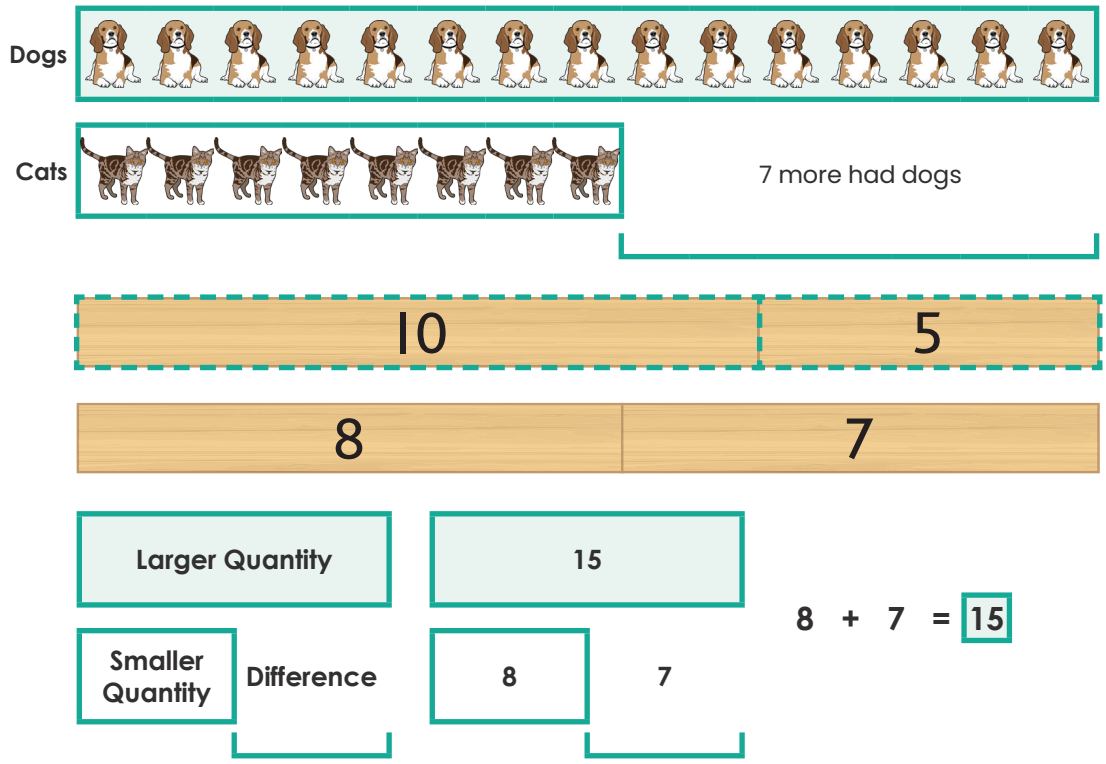
There were 13 drinking glasses.

© N. Rice & P. Swan

Question 7

Comparison / Static

In a class 8 students had pet cats. Seven more than this had dogs. *How many of them had pet dogs?*



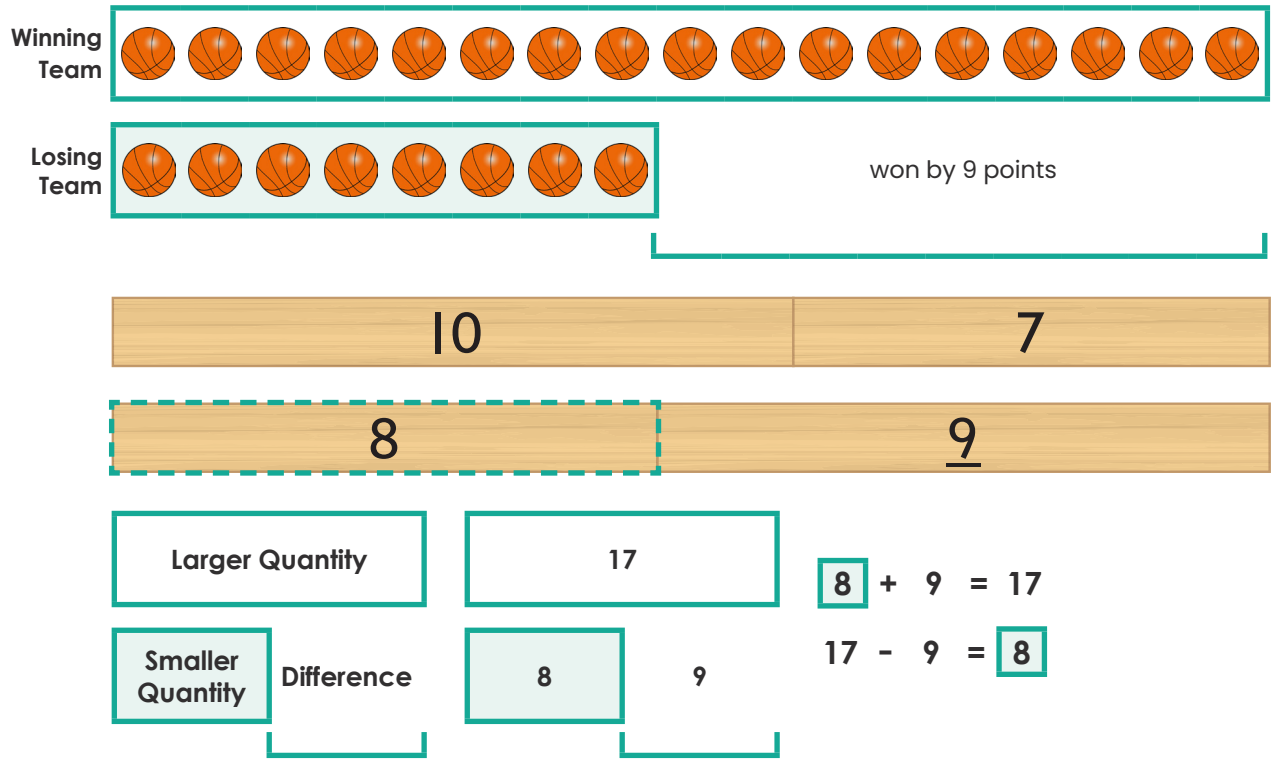
Fifteen children had pet dogs.

Question 8

Comparison / Active

In a basketball game the winning team scored 17 points. They won by 9 points.

How many points did the losing team score?

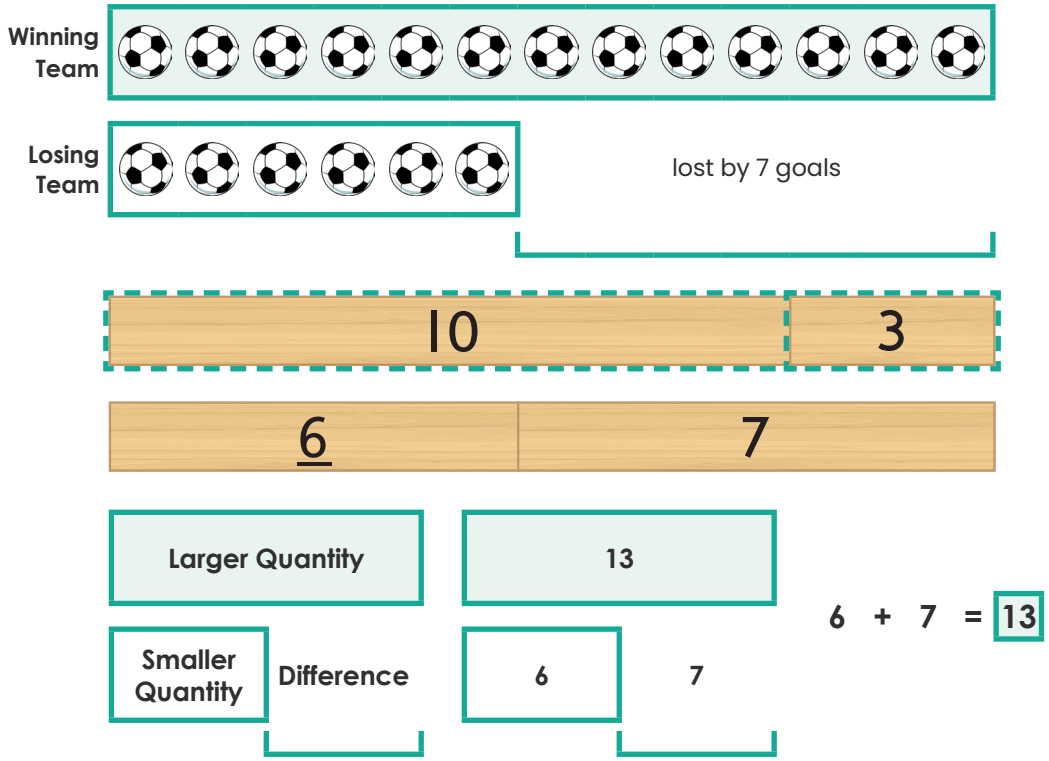


The losing team scored 8 points.

Question 9 **Comparison / Active and Part-Part-Whole / Active**

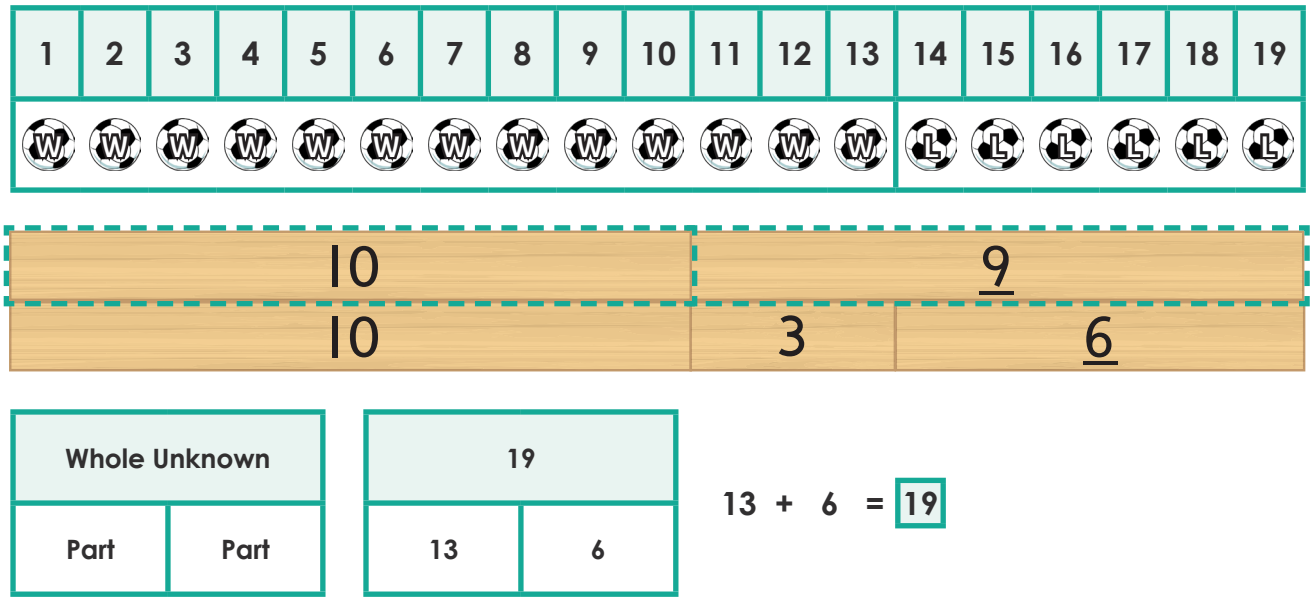
In a soccer game the losing team scored 6 goals. They lost by 7 goals. *How many goals were kicked in the game?*

Step 1: Calculate the number of goals scored by the winning team. ***Comparison / Active***



The winning team scored 13 goals.

Step 2: Calculate the total number of goals kicked in the game. ***Part-Part-Whole / Active***



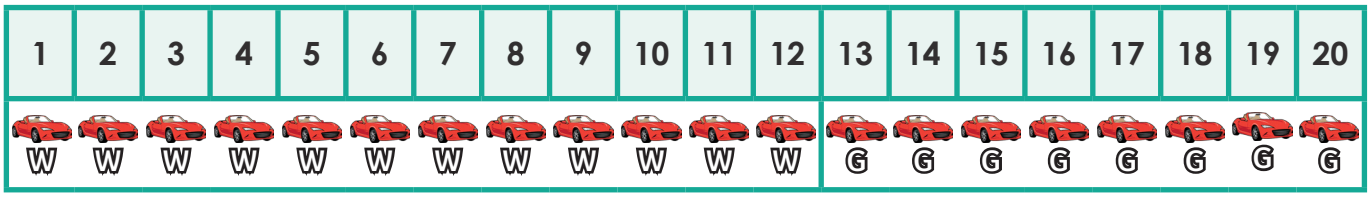
There was a total of 19 goals kicked during the game.

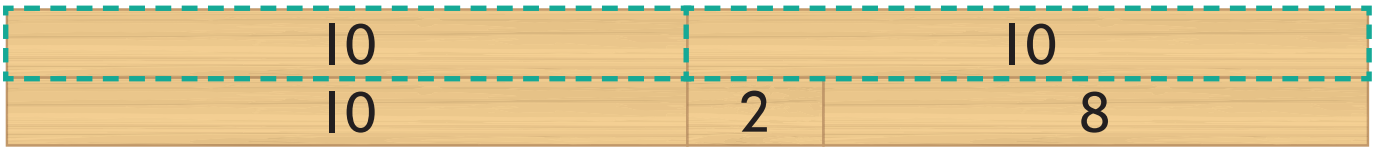
© N. Rice & P. Swan

Question 10

Part-Part-Whole / Active

In the car park there was a long queue of cars waiting for a green traffic light. Eight cars got through the green light before it changed. This left 12 cars waiting. *How many cars were in the queue of cars before the green light?*





Whole Unknown	
Part	Part

20	
12	8

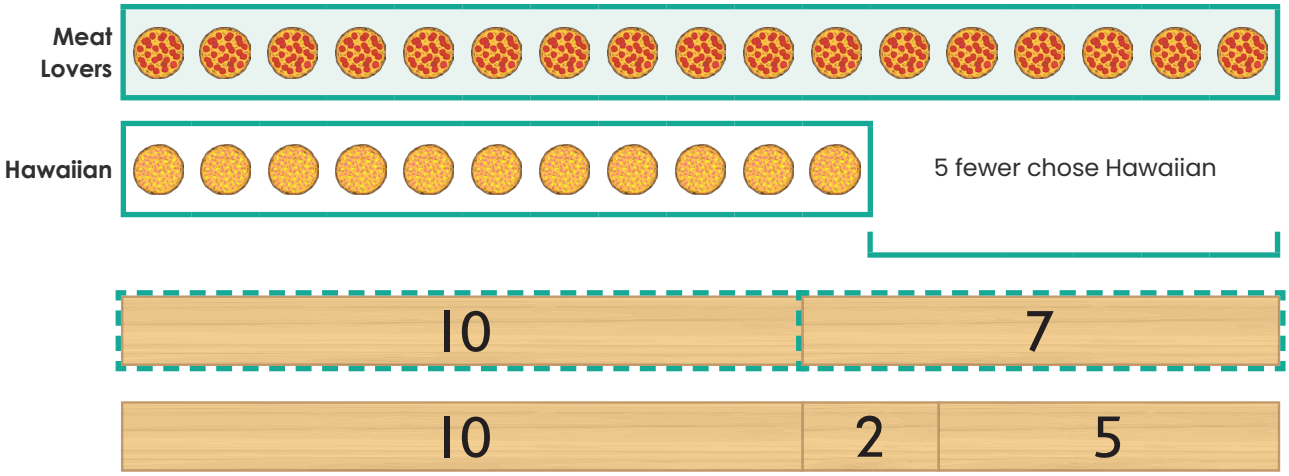
12 + 8 = 20

Twenty cars were in the car park before the green light.

Question 11

Comparison / Static

When ordering pizza, 12 people chose Hawaiian. This was 5 fewer than the number of people who chose Meat Lovers. *How many chose Meat Lovers?*



Larger Quantity	17
Smaller Quantity	12
Difference	5

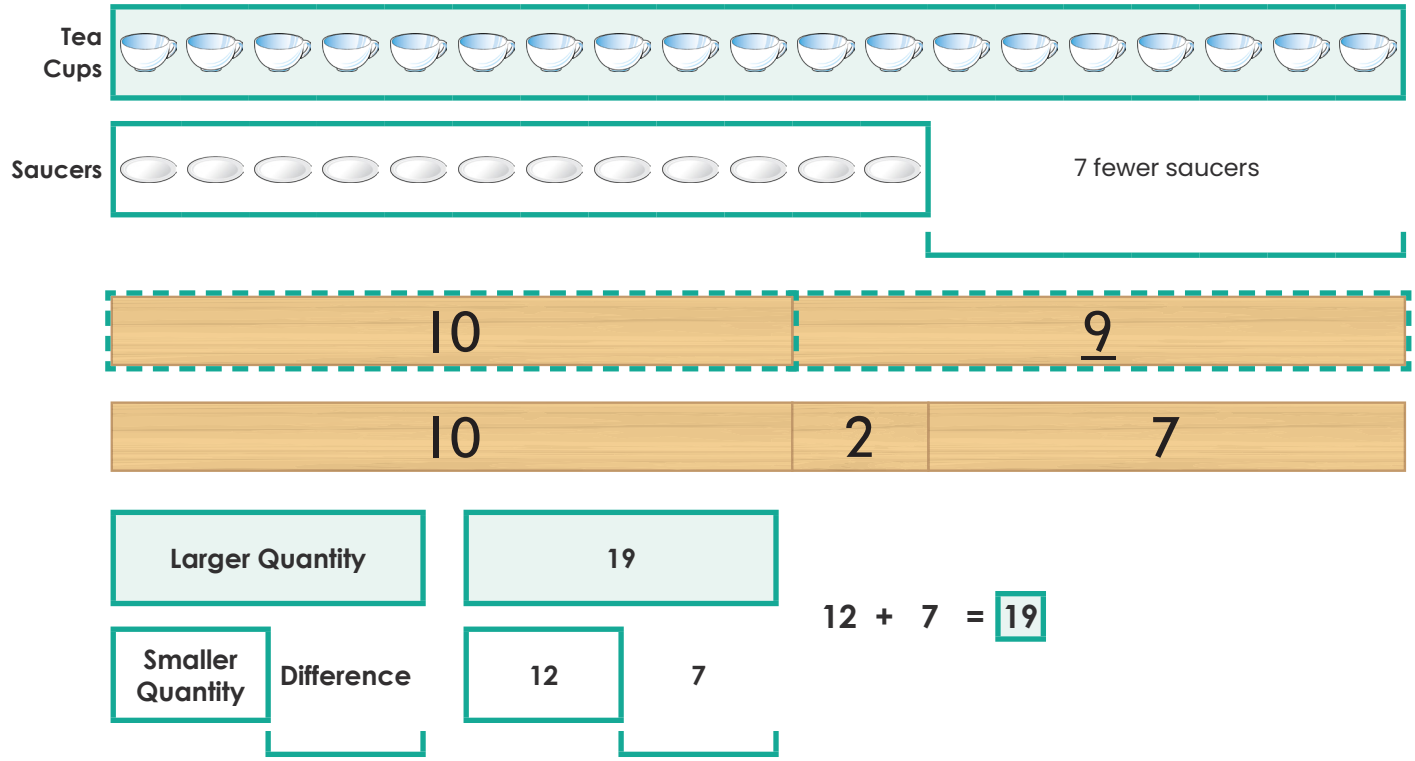
12 + 5 = 17

17 people chose Meat Lovers.

Question 12 **Comparison / Active and Part-Part-Whole / Active**

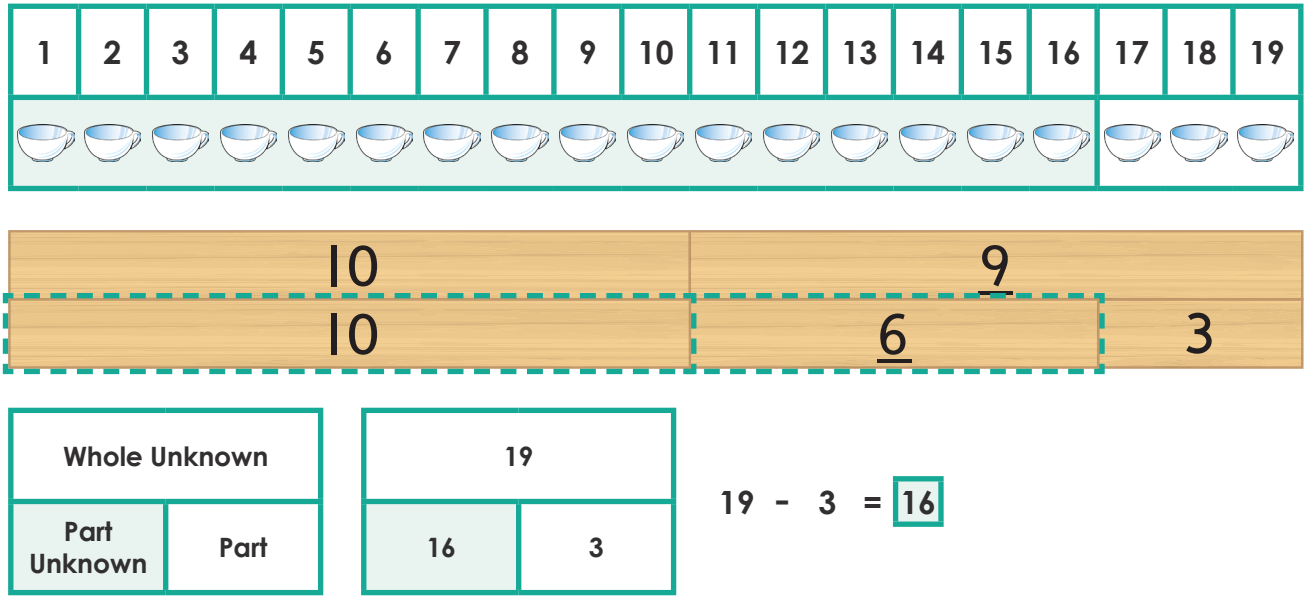
Melissa collected tea cups and saucers. When she matched the cups and saucers she found she had 7 fewer saucers. There were 12 saucers. Unfortunately whilst she was matching them she broke 3 tea cups. *How many tea cups did she end up with?*

Step 1: Calculate the number of tea cups. ***Comparison / Active***



Melissa had 19 tea cups.

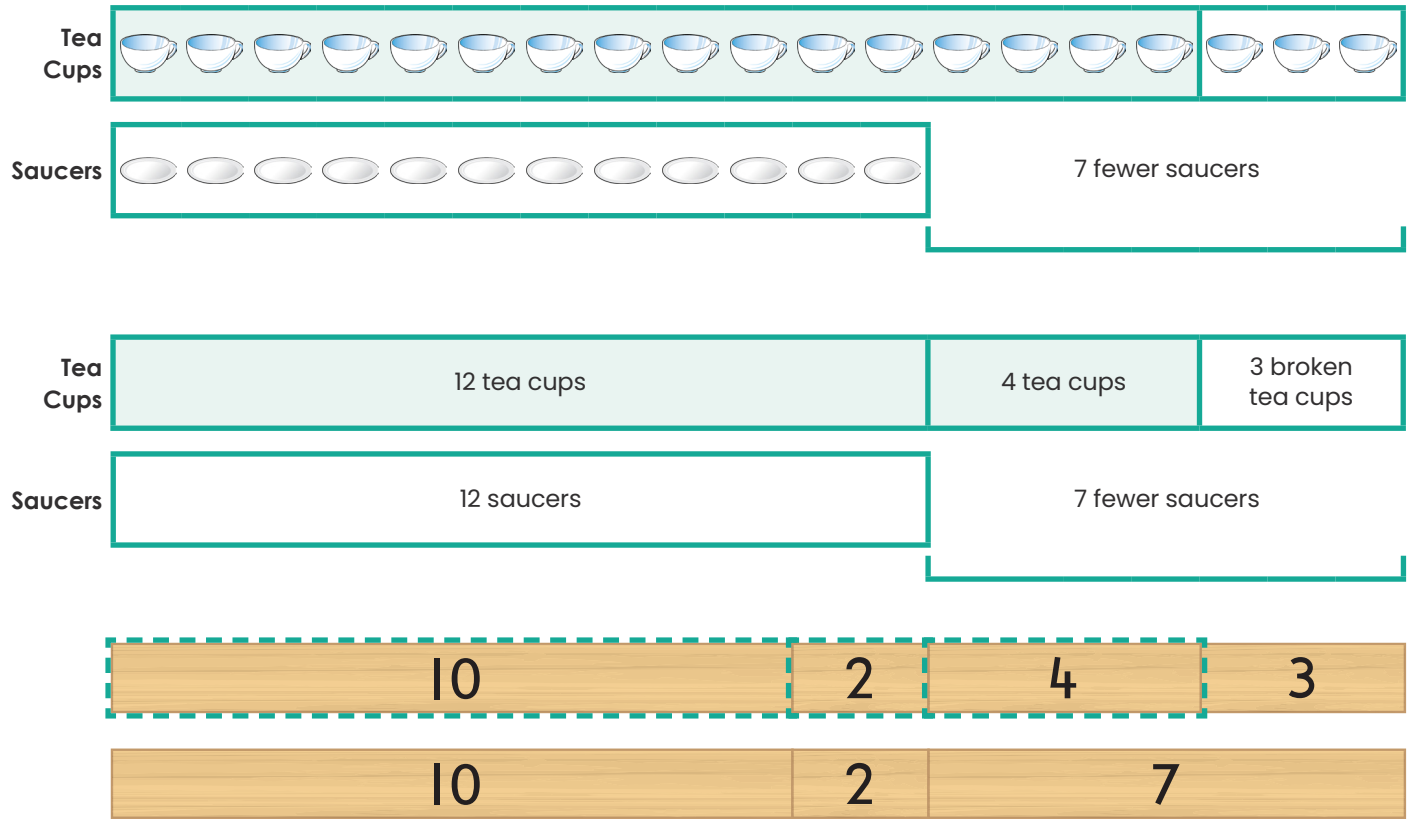
Step 2: Calculate the number of remaining tea cups after 3 were broken. ***Part-Part-Whole / Active***



Melissa had 16 tea cups remaining after 3 had been broken.

© N. Rice & P. Swan

Alternate Solution



7 - 3 = 4

12 + 4 = 16

There were 16 tea cups remaining after 3 had been broken.

6
7
8
9
10
3 3
4
4
2
2
1
1