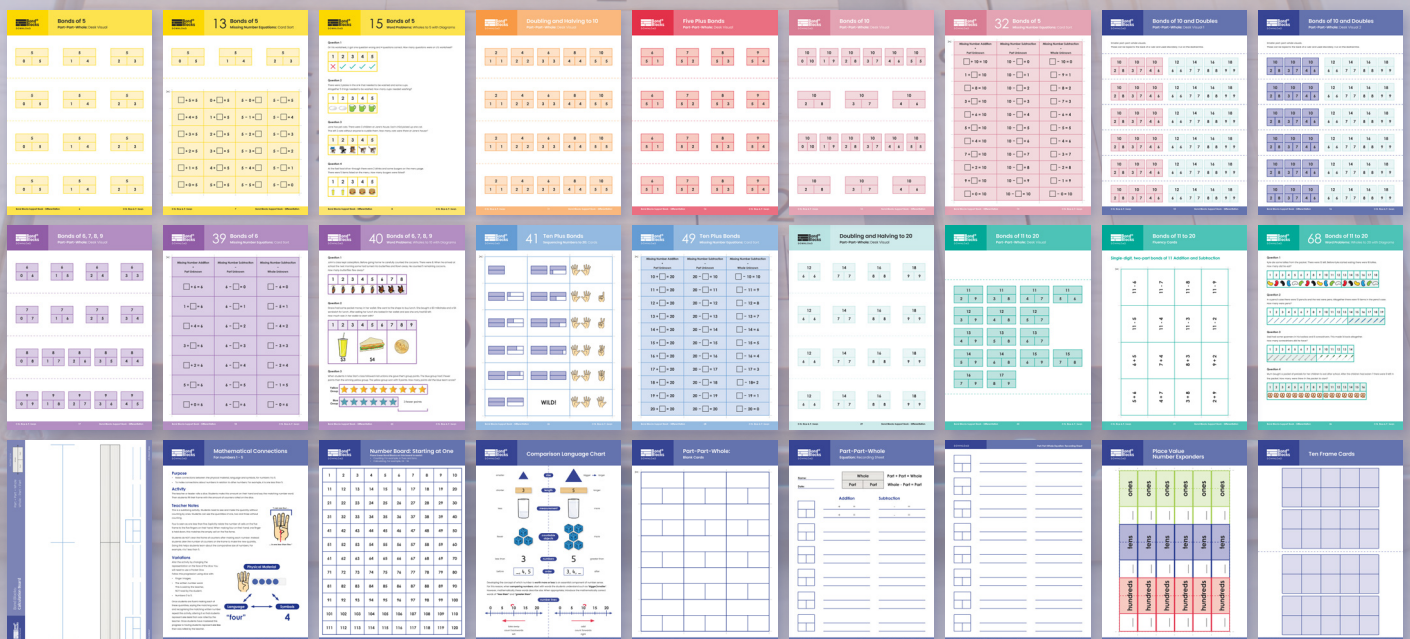


Bond Blocks Support Book:

Differentiation

- **Bonds of 5) Part-Part-Whole:** Desk Visual
- **13 - Bonds of 5) Missing Number Equations:** Card Sort
- **15 - Bonds of 5) Word Problems** Wholes to 5 with Diagrams
- **Doubling and Halving to 10) Part-Part-Whole:** Desk Visual
- **Five Plus Bonds) Part-Part-Whole:** Desk Visual
- **Bonds of 10) Part-Part-Whole:** Desk Visual
- **32 - Bonds of 10) Missing Number Equations:** Card Sort
- **Bonds of 10 and Doubles) Part-Part-Whole:** Desk Visual 1
- **Bonds of 10 and Doubles) Part-Part-Whole:** Desk Visual 2
- **Bonds of 6, 7, 8, 9) Part-Part-Whole:** Desk Visual
- **39 - Bonds of 6) Missing Number Equations:** Card Sort
- **39 - Bonds of 7) Missing Number Equations:** Card Sort
- **39 - Bonds of 8) Missing Number Equations:** Card Sort
- **39 - Bonds of 9) Missing Number Equations:** Card Sort
- **40 - Bonds of 6, 7, 8, 9) Word Problems:** Wholes to 10 with Diagrams
- **41 - Ten Plus Bonds) Sequencing Numbers to 20:** Cards
- **49 - Ten Plus Bonds) Missing Number Equations:** Card Sort
- **Doubling and Halving to 20) Part-Part-Whole:** Desk Visual
- **Bonds of 11 to 20) Part-Part-Whole:** Desk Visual
- **Bonds of 11 to 20) Fluency Cards**
- **68 - Bonds of 11 to 20) Word Problems:** Wholes to 20 with Diagrams
- **Bond Blocks Calculation Board**
- **Mathematical Connections for Numbers 1 - 5**
- **Number Board: Starting at One**
- **Number Board: Starting at Zero**
- **Comparison Language Chart**
- **Part-Part-Whole: Blank Cards**
- **Part-Part-Whole - Equation: Recording Sheet**
- **Place Value Arrow Cards and Number Expanders**
- **Ten Frame Cards**



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Bond Blocks Support Book – Differentiation

First published 2021 (Updated 2023)

Authors: Narelle Rice and Dr Paul Swan

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The author may be contacted at: info@bondblocks.com.au

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Thank you for purchasing Bond Blocks.

We hope they help build

Curiosity,
Connections and
Confidence with maths.

– Narelle and Paul.

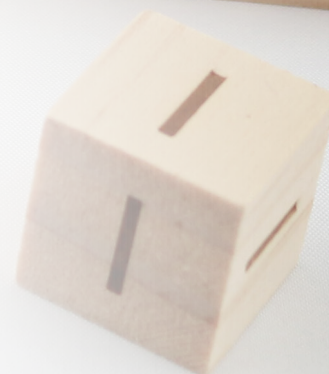
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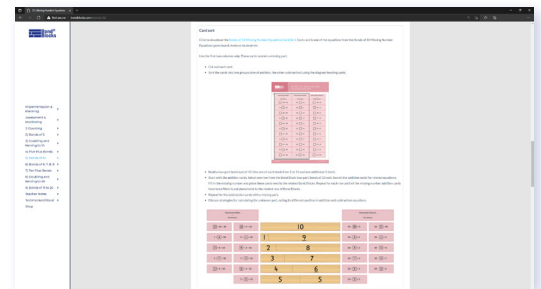
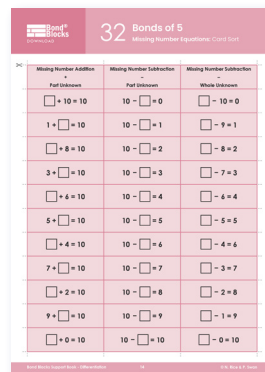
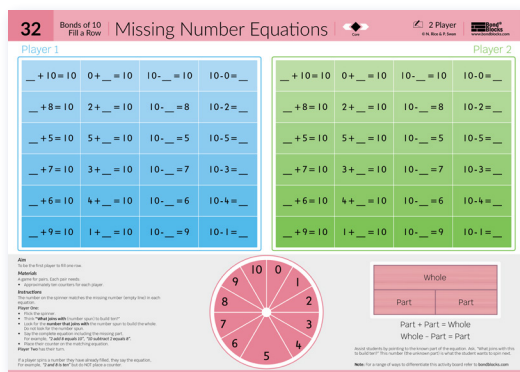
About This Book

Each activity's web page contains differentiation ideas. Some of these ideas explain how to alter the A3 activity board. Other differentiation ideas are separate, but related, activities. These differentiation activities are ready-to-go once downloaded. Each differentiation activity download is located on the related activity web page. They have also been printed in this book.

There are three main types of differentiation downloads.

Specific Activity Differentiations

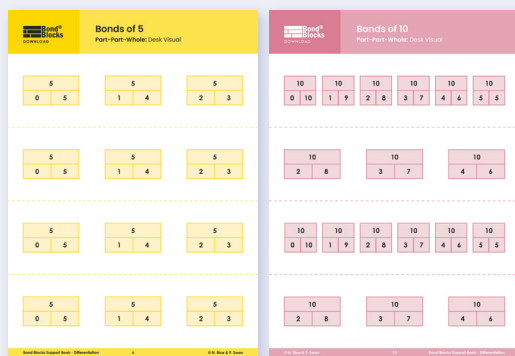
The first type of differentiation downloads are for specific activities. For example, Activity 32 has:



This is Core Activity 32. Each of the questions on the board are used in the related differentiation activity.

Related differentiation activity for Activity 32.

Differentiation activity instructions located on the website under Activity 32.



These examples show Part-Part-Whole desk visuals for the Bonds of 5 and Bonds of 10.

Desk Visuals

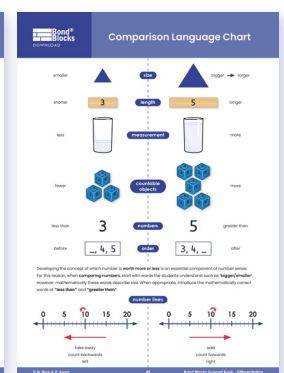
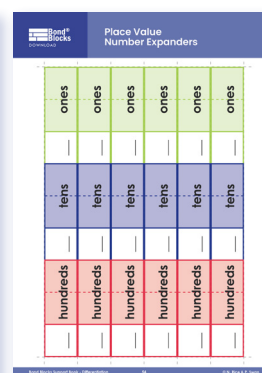
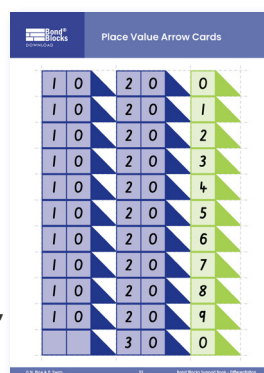
The second type of differentiation downloads are desk visuals. These support students with working memory difficulties. There is a related Teacher Note document titled "Using Part-Part-Whole Desk Visuals" that explains how to use them.

There is one desk visual for every bond made of two, single-digit numbers. This set of bonds is referred to as 'basic facts'.

Generic Downloads

The third type are generic downloads that can be used to differentiate a range of activities.

These examples show generic downloads for "Place Value Arrow Cards" and "Number Expanders" and "Comparison Language Chart."



Bonds of 5

Part-Part-Whole: Desk Visual

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

13 Bonds of 5

Missing Number Equations: Card Sort

5	
0	5

5	
1	4

5	
2	3



$\square + 5 = 5$	$0 + \square = 5$	$5 - 0 = \square$	$5 - \square = 5$
$\square + 4 = 5$	$1 + \square = 5$	$5 - 1 = \square$	$5 - \square = 4$
$\square + 3 = 5$	$2 + \square = 5$	$5 - 2 = \square$	$5 - \square = 3$
$\square + 2 = 5$	$3 + \square = 5$	$5 - 3 = \square$	$5 - \square = 2$
$\square + 1 = 5$	$4 + \square = 5$	$5 - 4 = \square$	$5 - \square = 1$
$\square + 0 = 5$	$5 + \square = 5$	$5 - 5 = \square$	$5 - \square = 0$






Question 1

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

1	2	3	4	5
✗	✓	✓	✓	✓






Question 2

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?*

1	2	3	4	5
				






Question 3

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?*

1	2	3	4	5
				

Question 4

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?*

1	2	3	4	5
				

Question 5

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

How many blue donuts were there?

**Pink
Donuts**



**Blue
Donuts**



2 more pink
donuts

Question 6

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?*

**Cricket
Balls**



**Cricket
Bats**

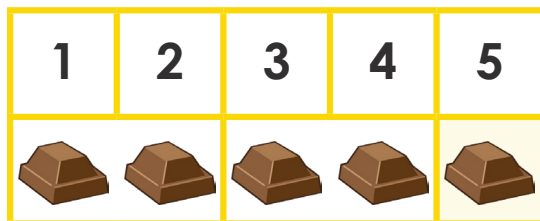


one
bat
fewer

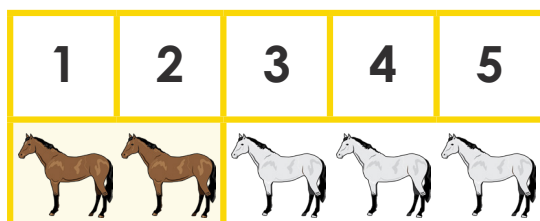
Question 7

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?

**Question 8**

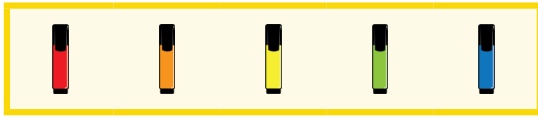
Aisha had 5 toy ponies. Some were brown. The other 3 were white. *How many brown ponies did Aisha have?*



Question 9

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?*

Lidded
Textas



No Lid
Textas



2 more
with lids

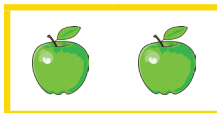
Question 10

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?*

Red
Apples



Green
Apples



3 more red apples

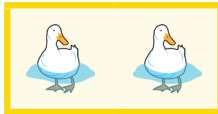
Question 11

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

Sleeping
Ducks



Swimming
Ducks



3 more
sleeping ducks

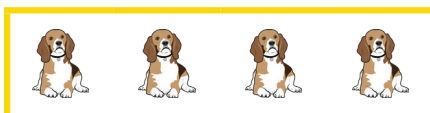
Question 12

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?*

Bones



Dogs



one
dog
fewer

Doubling and Halving to 10

Part-Part-Whole: Desk Visual

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

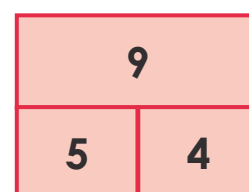
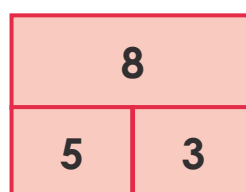
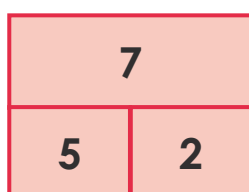
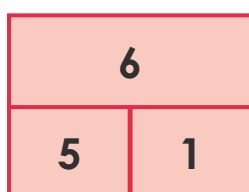
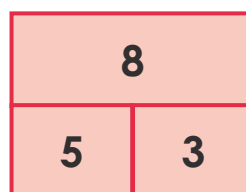
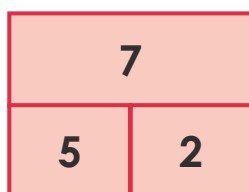
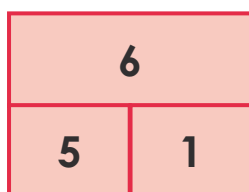
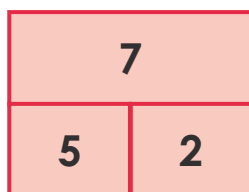
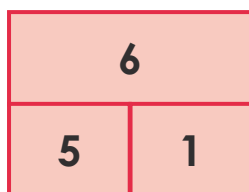
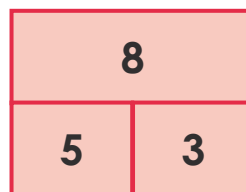
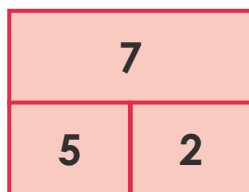
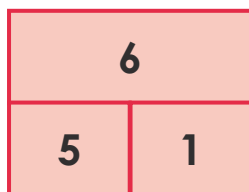
6	
3	3

8	
4	4

10	
5	5

Five Plus Bonds

Part-Part-Whole: Desk Visual



Bonds of 10

Part-Part-Whole: Desk Visual

10	10	10	10	10	10
0	10	1	9	2	8
3	7	4	6	5	5

10	10	10
2	8	3
7	4	6

10	10	10	10	10	10
0	10	1	9	2	8
3	7	4	6	5	5

10	10	10
2	8	3
7	4	6



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$\square + 10 = 10$	$10 - \square = 0$	$\square - 10 = 0$
$1 + \square = 10$	$10 - \square = 1$	$\square - 9 = 1$
$\square + 8 = 10$	$10 - \square = 2$	$\square - 8 = 2$
$3 + \square = 10$	$10 - \square = 3$	$\square - 7 = 3$
$\square + 6 = 10$	$10 - \square = 4$	$\square - 6 = 4$
$5 + \square = 10$	$10 - \square = 5$	$\square - 5 = 5$
$\square + 4 = 10$	$10 - \square = 6$	$\square - 4 = 6$
$7 + \square = 10$	$10 - \square = 7$	$\square - 3 = 7$
$\square + 2 = 10$	$10 - \square = 8$	$\square - 2 = 8$
$9 + \square = 10$	$10 - \square = 9$	$\square - 1 = 9$
$\square + 0 = 10$	$10 - \square = 10$	$\square - 0 = 10$

Bonds of 10 and Doubles

Part-Part-Whole: Desk Visual 1

Smaller part-part-whole visuals.

These can be taped to the back of a ruler and used discretely. Cut on the dashed line.

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

Bonds of 10 and Doubles

Part-Part-Whole: Desk Visual 2

Smaller part-part-whole visuals.

These can be taped to the back of a ruler and used discretely. Cut on the dashed line.

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

10	
2	8

10	
3	7

10	
4	6

12	
6	6

14	
7	7

16	
8	8

18	
9	9

Bonds of 6, 7, 8, 9

Part-Part-Whole: Desk Visual

6	
0	6

6	
1	5

6	
2	4

6	
3	3

7	
0	7

7	
1	6

7	
2	5

7	
3	4

8	
0	8

8	
1	7

8	
2	6

8	
3	5

8	
4	4

9	
0	9

9	
1	8

9	
2	7

9	
3	6

9	
4	5



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$\square + 6 = 6$	$6 - \square = 0$	$\square - 6 = 0$
$1 + \square = 6$	$6 - \square = 1$	$\square - 5 = 1$
$\square + 4 = 6$	$6 - \square = 2$	$\square - 4 = 2$
$3 + \square = 6$	$6 - \square = 3$	$\square - 3 = 3$
$\square + 2 = 6$	$6 - \square = 4$	$\square - 2 = 4$
$5 + \square = 6$	$6 - \square = 5$	$\square - 1 = 5$
$\square + 0 = 6$	$6 - \square = 6$	$\square - 0 = 6$



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$\square + 7 = 7$	$7 - \square = 0$	$\square - 7 = 0$
$1 + \square = 7$	$7 - \square = 1$	$\square - 6 = 1$
$\square + 5 = 7$	$7 - \square = 2$	$\square - 5 = 2$
$3 + \square = 7$	$7 - \square = 3$	$\square - 4 = 3$
$4 + \square = 7$	$7 - \square = 4$	$\square - 3 = 4$
$\square + 2 = 7$	$7 - \square = 5$	$\square - 2 = 5$
$6 + \square = 7$	$7 - \square = 6$	$\square - 1 = 6$
$\square + 0 = 7$	$7 - \square = 7$	$\square - 0 = 7$



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$\square + 8 = 8$	$8 - \square = 0$	$\square - 8 = 0$
$1 + \square = 8$	$8 - \square = 1$	$\square - 7 = 1$
$\square + 6 = 8$	$8 - \square = 2$	$\square - 6 = 2$
$3 + \square = 8$	$8 - \square = 3$	$\square - 5 = 3$
$\square + 4 = 8$	$8 - \square = 4$	$\square - 4 = 4$
$5 + \square = 8$	$8 - \square = 5$	$\square - 3 = 5$
$\square + 2 = 8$	$8 - \square = 6$	$\square - 2 = 6$
$7 + \square = 8$	$8 - \square = 7$	$\square - 1 = 7$
$\square + 0 = 8$	$8 - \square = 8$	$\square - 0 = 8$



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$\square + 9 = 9$	$9 - \square = 0$	$\square - 9 = 0$
$1 + \square = 9$	$9 - \square = 1$	$\square - 8 = 1$
$\square + 7 = 9$	$9 - \square = 2$	$\square - 7 = 2$
$3 + \square = 9$	$9 - \square = 3$	$\square - 6 = 3$
$\square + 5 = 9$	$9 - \square = 4$	$\square - 5 = 4$
$\square + 4 = 9$	$9 - \square = 5$	$\square - 4 = 5$
$6 + \square = 9$	$9 - \square = 6$	$\square - 3 = 6$
$\square + 2 = 9$	$9 - \square = 7$	$\square - 2 = 7$
$8 + \square = 9$	$9 - \square = 8$	$\square - 1 = 8$
$\square + 0 = 9$	$9 - \square = 9$	$\square - 0 = 9$

Question 1

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.

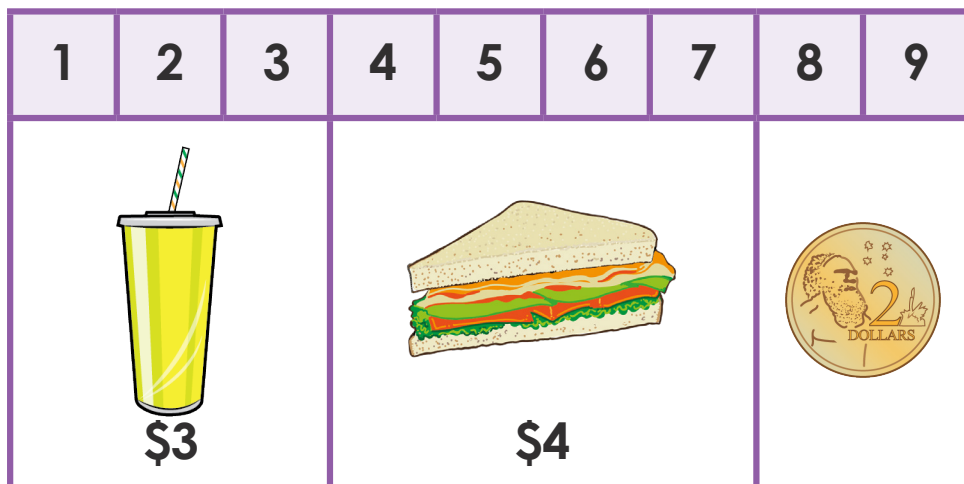
How many butterflies flew away?



Question 2

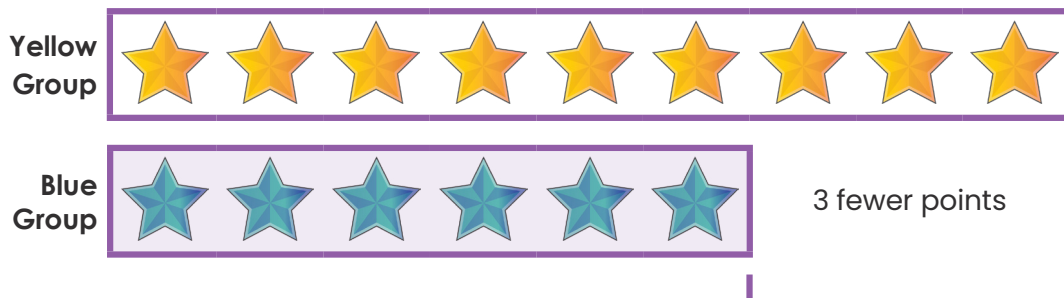
Grace had some pocket money in her wallet. She went to the shops to buy lunch. She bought a \$3 milkshake and a \$4 sandwich for lunch. After eating her lunch she looked in her wallet and saw she only had \$2 left.

How much was in her wallet to start with?



Question 3

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?*

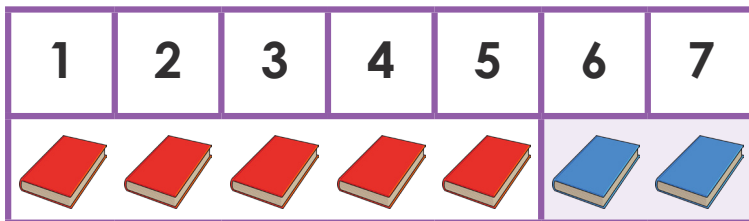


Question 4

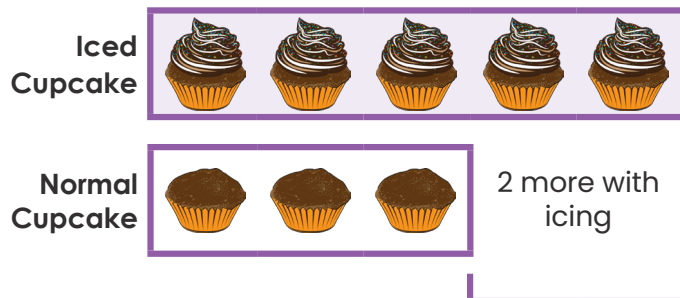
Chung's Dad gave him some packets of collector cards. Each packet had one card inside. He had opened 7 packets and had 3 packets still to open. *How many packets did his dad give him?*

**Question 5**

Yasmine 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?*

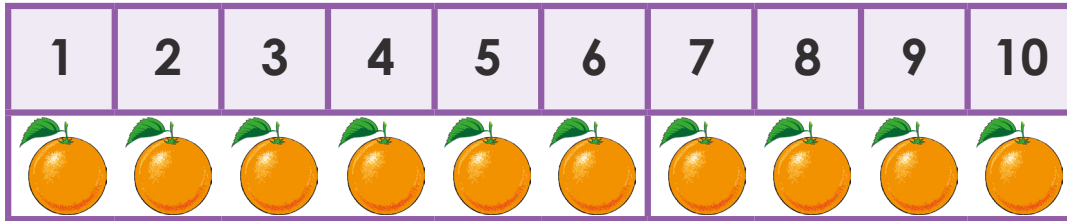
**Question 6**

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:**Step 2:**

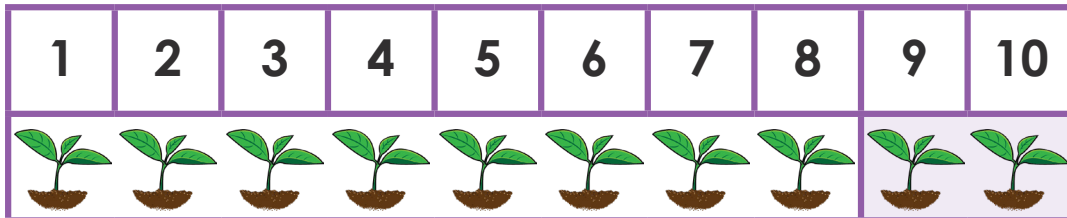
Question 7

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?



Question 8

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?

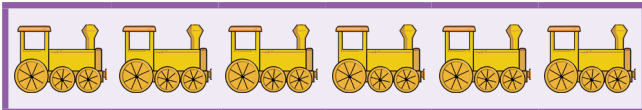


Question 9

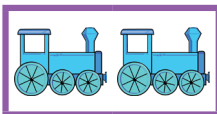
Tim had 2 battery operated toy trains. His friend Isabelle had 4 more than him. Tim went to play at Isabelle's house and took his trains. How many trains did they have to play with together?

Step 1:

Isabelle's
Trains



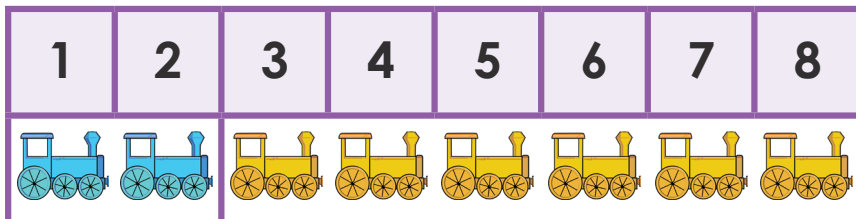
Tim's
Trains



4 more toy trains

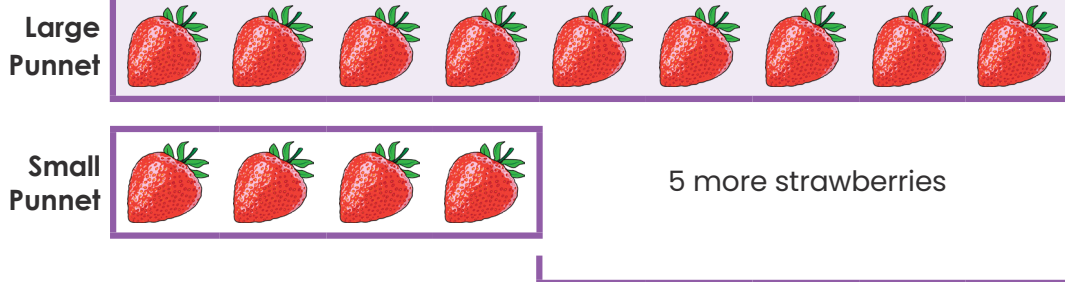


Step 2:

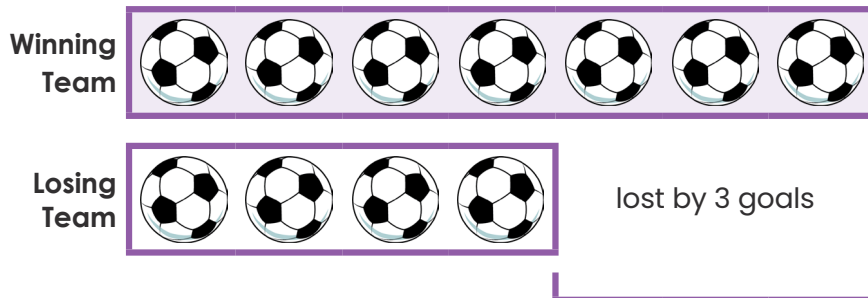


Question 10

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?*

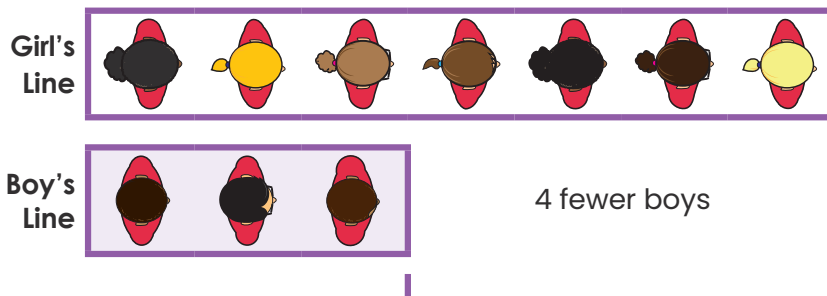
**Question 11**

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?*

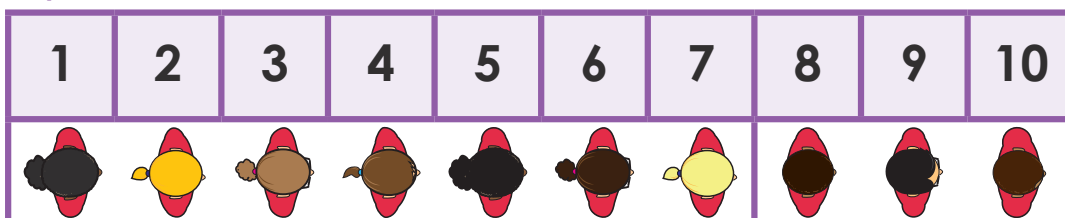
**Question 12**

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.



Step 2: Calculate the number of children.

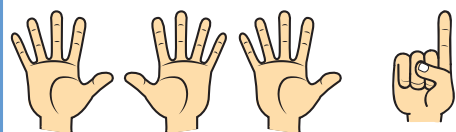


41 Ten Plus Bonds

Sequencing Numbers to 20: Cards



	WILD!	



10

16



11

17



12

18



13

19



14

20

WILD!

15

WILD!



Missing Number Addition + Part Unknown	Missing Number Subtraction - Part Unknown	Missing Number Subtraction - Whole Unknown
$10 + \square = 20$	$20 - \square = 10$	$\square - 10 = 10$
$11 + \square = 20$	$20 - \square = 11$	$\square - 11 = 9$
$12 + \square = 20$	$20 - \square = 12$	$\square - 12 = 8$
$13 + \square = 20$	$20 - \square = 13$	$\square - 13 = 7$
$14 + \square = 20$	$20 - \square = 14$	$\square - 14 = 6$
$15 + \square = 20$	$20 - \square = 15$	$\square - 15 = 5$
$16 + \square = 20$	$20 - \square = 16$	$\square - 16 = 4$
$17 + \square = 20$	$20 - \square = 17$	$\square - 17 = 3$
$18 + \square = 20$	$20 - \square = 18$	$\square - 18 = 2$
$19 + \square = 20$	$20 - \square = 19$	$\square - 19 = 1$
$20 + \square = 20$	$20 - \square = 20$	$\square - 20 = 0$

Doubling and Halving to 20

Part-Part-Whole: Desk Visual

12	
6	6

14	
7	7

16	
8	8

18	
9	9

12	
6	6

14	
7	7

16	
8	8

18	
9	9

12	
6	6

14	
7	7

16	
8	8

18	
9	9

12	
6	6

14	
7	7

16	
8	8


18	
9	9

Bonds of 11 to 20

Part-Part-Whole: Desk Visual


<table><tr><td colspan="2">11</td></tr><tr><td>2</td><td>9</td></tr></table>	11		2	9	<table><tr><td colspan="2">11</td></tr><tr><td>3</td><td>8</td></tr></table>	11		3	8	<table><tr><td colspan="2">11</td></tr><tr><td>4</td><td>7</td></tr></table>	11		4	7	<table><tr><td colspan="2">11</td></tr><tr><td>5</td><td>6</td></tr></table>	11		5	6
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11																			
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16																			
7	9																		
17																			
8	9																		

Single-digit, two-part bonds of 11 Addition and Subtraction




$11 - 6$	$11 - 7$	$11 - 8$	$11 - 9$
$11 - 5$	$11 - 4$	$11 - 3$	$11 - 2$
$6 + 5$	$7 + 4$	$8 + 3$	$9 + 2$
$5 + 6$	$4 + 7$	$3 + 8$	$2 + 9$

Single-digit, two-part bonds of 12 Addition and Subtraction




$5 + 7$	$7 + 5$	$12 - 5$	$12 - 7$
$4 + 8$	$8 + 4$	$12 - 4$	$12 - 8$
$3 + 9$	$9 + 3$	$12 - 3$	$12 - 9$
$6 + 6$		$12 - 6$	

Single-digit, two-part bonds of 13 Addition and Subtraction



$6 + 7$	$7 + 6$	$13 - 6$	$13 - 7$
$5 + 8$	$8 + 5$	$13 - 5$	$13 - 8$
$4 + 9$	$9 + 4$	$13 - 4$	$13 - 9$

Single-digit, two-part bonds of 14 Addition and Subtraction



$14 - 8$	$14 - 9$		
$14 - 6$	$14 - 5$	$14 - 7$	
$8 + 6$	$9 + 5$		
$6 + 8$	$5 + 9$	$7 + 7$	

Single-digit, two-part bonds of 15, 16, 17, 18 Addition and Subtraction



$$15 - 8$$

$$15 - 9$$

$$16 - 9$$

$$18 - 9$$

$$17 - 9$$

$$15 - 7$$

$$15 - 6$$

$$16 - 7$$

$$16 - 8$$

$$17 - 8$$

$$8 + 7$$

$$9 + 6$$

$$9 + 7$$

$$9 + 9$$

$$9 + 8$$

$$7 + 8$$

$$6 + 9$$

$$7 + 9$$

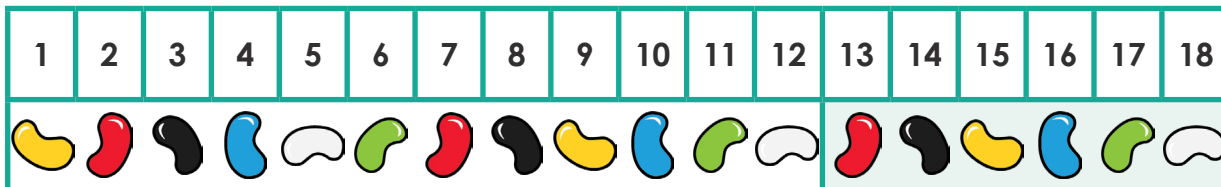
$$8 + 8$$

$$8 + 9$$

Question 1

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

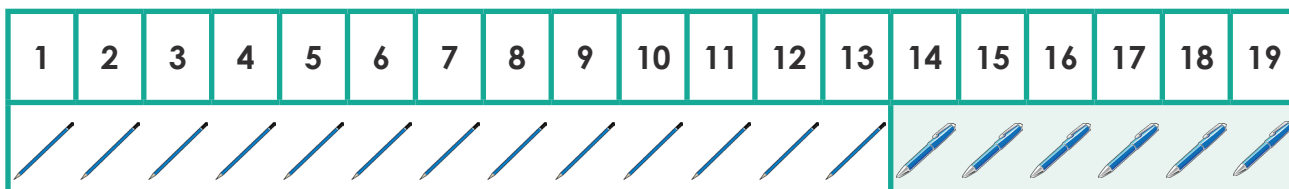
How many did he eat?



Question 2

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

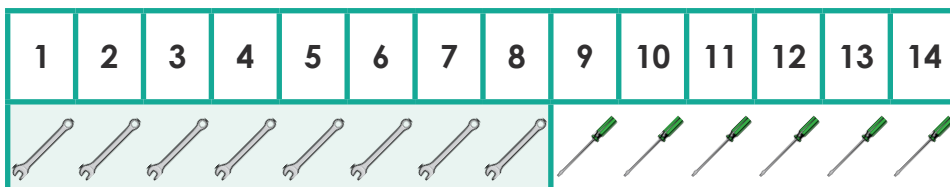
How many were pens?



Question 3

Dad had some spanners in his toolbox and 6 screwdrivers. This made 14 tools altogether.

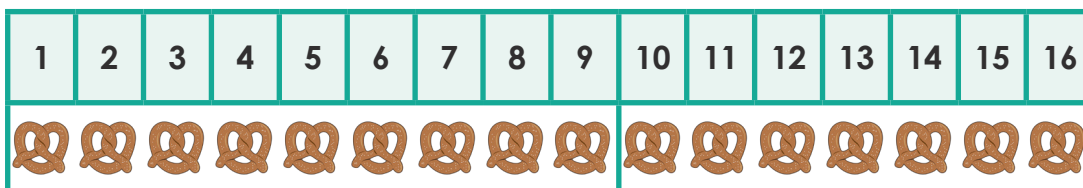
How many screwdrivers did he have?



Question 4

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.

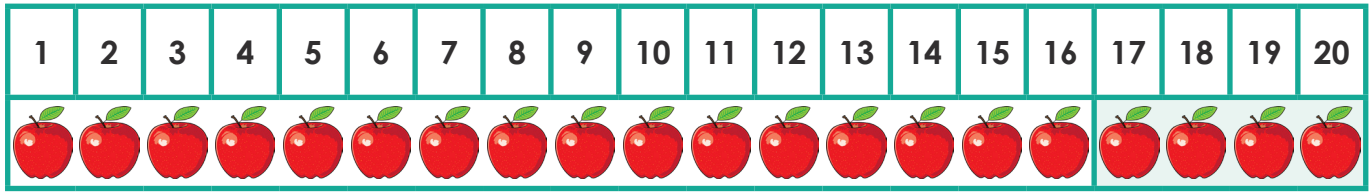
How many were there in the packet to start?



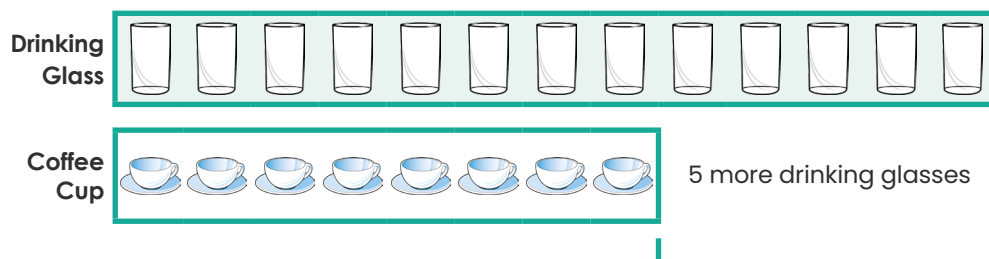
Question 5

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

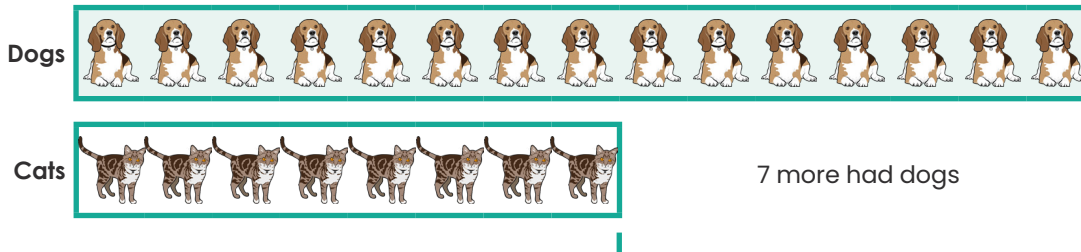
How many did the farmer pick?

**Question 6**

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?*

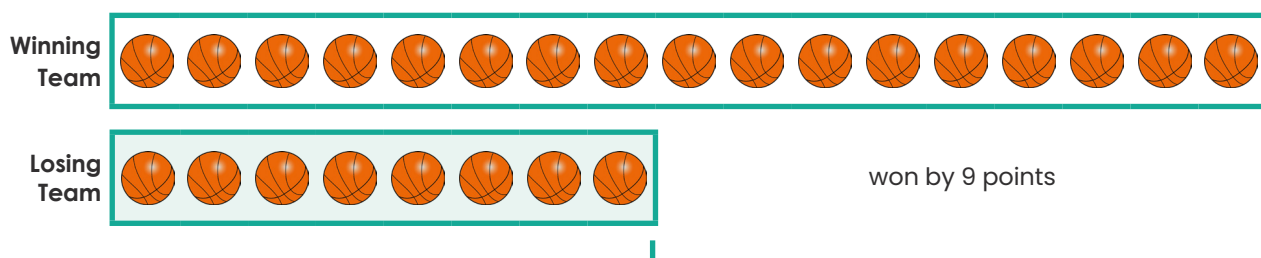
**Question 7**

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

**Question 8**

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

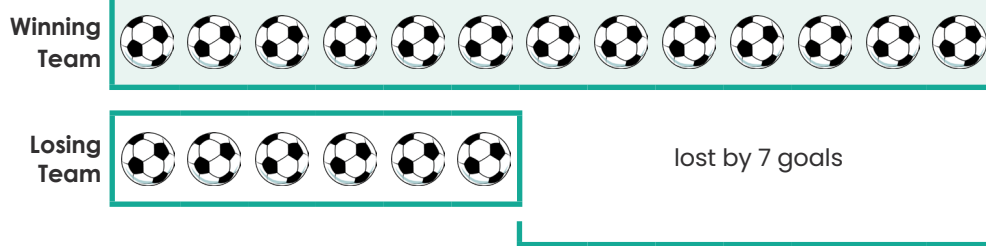
How many points did the losing team score?



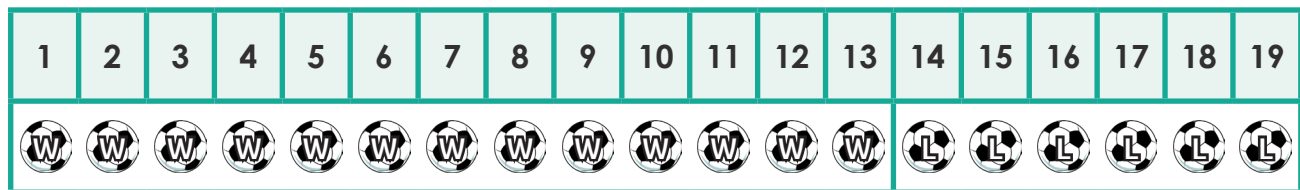
Question 9

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.

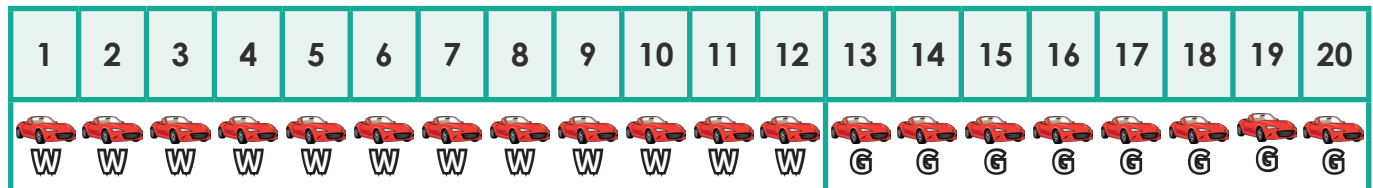


Step 2: Calculate the total number of goals kicked in the game.



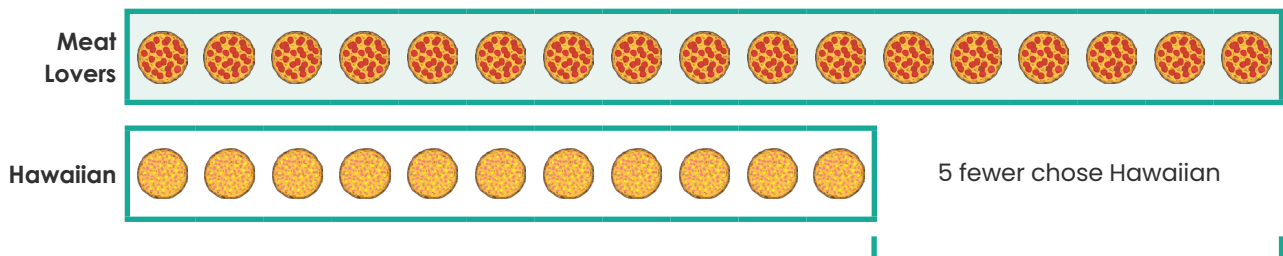
Question 10

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?



Question 11

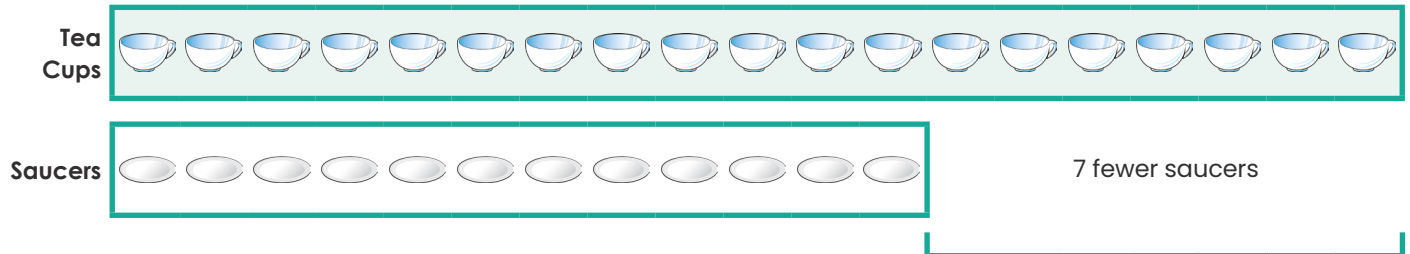
When ordering pizza, 12 people chose Hawaiian. This was 5 fewer than the number of people who chose Meat Lovers. How many chose Meat Lovers?



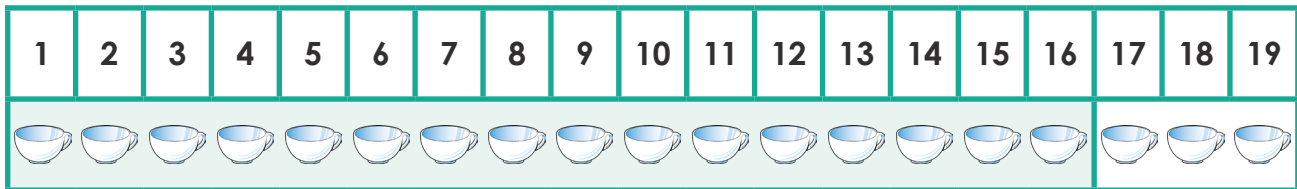
Question 12

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.




Step 2: Calculate the number of remaining tea cups after 3 were broken.



Bonds Blocks

Calculation Board

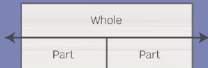
The generic **Bond Blocks: Calculation Board** is an A3 download available from
<http://bondblocks.com/general-resources/>



Bond Blocks:
Calculation Board

Part + Part = Whole
Whole - Part = Part

Number Line



Purpose

- Make connections between: the physical material, language and symbols, for numbers 1 to 5.
- To make connections about numbers in relation to other numbers. For example, 4 is one less than 5.

Activity

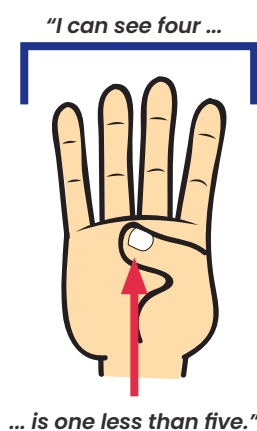
The teacher or leader rolls a dice. Students make this amount on their hand and say the matching number word. Then students fill their frame with the amount of counters rolled on the dice.

Teacher Notes

This is a subitising activity. Students need to see and make the quantity without counting by ones. Students can see the quantities of one, two and three without counting.

Four is seen as one less than five. Explicitly relate the number of cells on the five frame to the five fingers on their hand. When making four on their hand, one finger is held down, this matches the empty cell on the five frame.

Students do NOT clear the frame of counters after making each number. Instead students alter the number of counters on the frame to make the new quantity. Doing this helps students learn about the comparative size of numbers. For example, 4 is 1 less than 5.



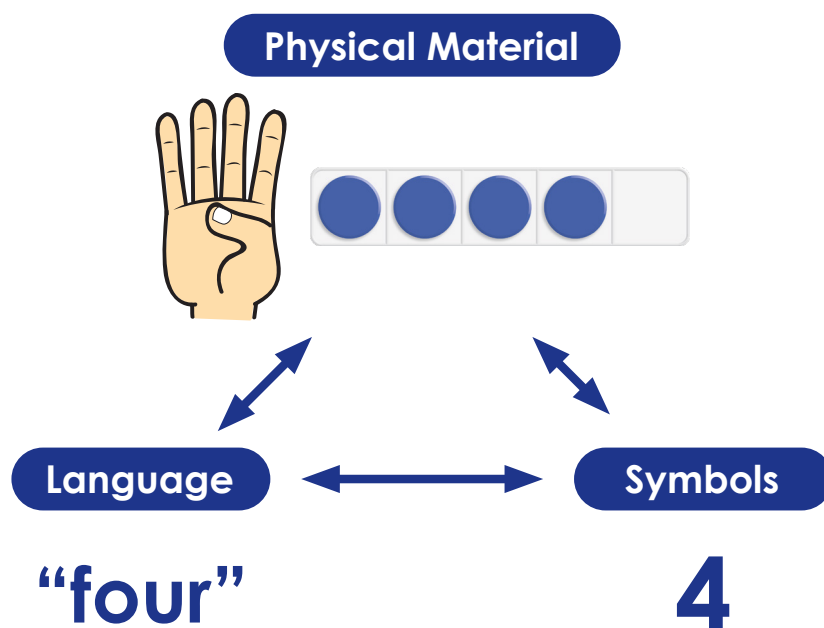
Variations

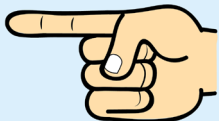
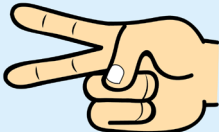
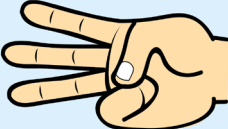
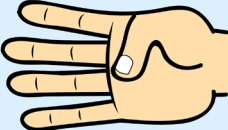
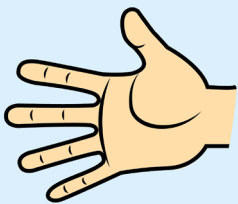
Alter the activity by changing the representation on the face of the dice. You will need to use a Pocket Dice.

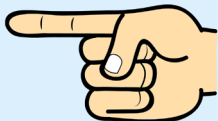
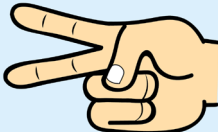

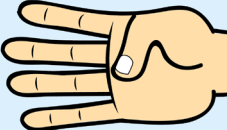
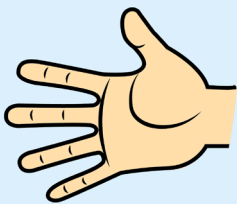
Follow this progression using dice with:

- Finger images.
- The written number word.
This is said by the teacher,
NOT read by the student.
- Numbers 0 to 5.

Once students are fluent making each of these quantities, saying the matching word and recognising the matching written number repeat this activity, altering it so that students represent *one more* than was rolled by the teacher. Once students have mastered this progress to having students represent *one less* than was rolled by the teacher.



1		<div><div></div><div></div><div></div><div></div><div></div></div>
2		<div><div></div><div></div><div></div><div></div><div></div></div>
3		<div><div></div><div></div><div></div><div></div><div></div></div>
4		<div><div></div><div></div><div></div><div></div><div></div></div>
5		<div><div></div><div></div><div></div><div></div><div></div></div>

1		<div><div></div><div></div><div></div><div></div><div></div></div>
2		<div><div></div><div></div><div></div><div></div><div></div></div>
3		<div><div></div><div></div><div></div><div></div><div></div></div>
4		<div><div></div><div></div><div></div><div></div><div></div></div>
5		<div><div></div><div></div><div></div><div></div><div></div></div>

<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>
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What are Pocket Dice?

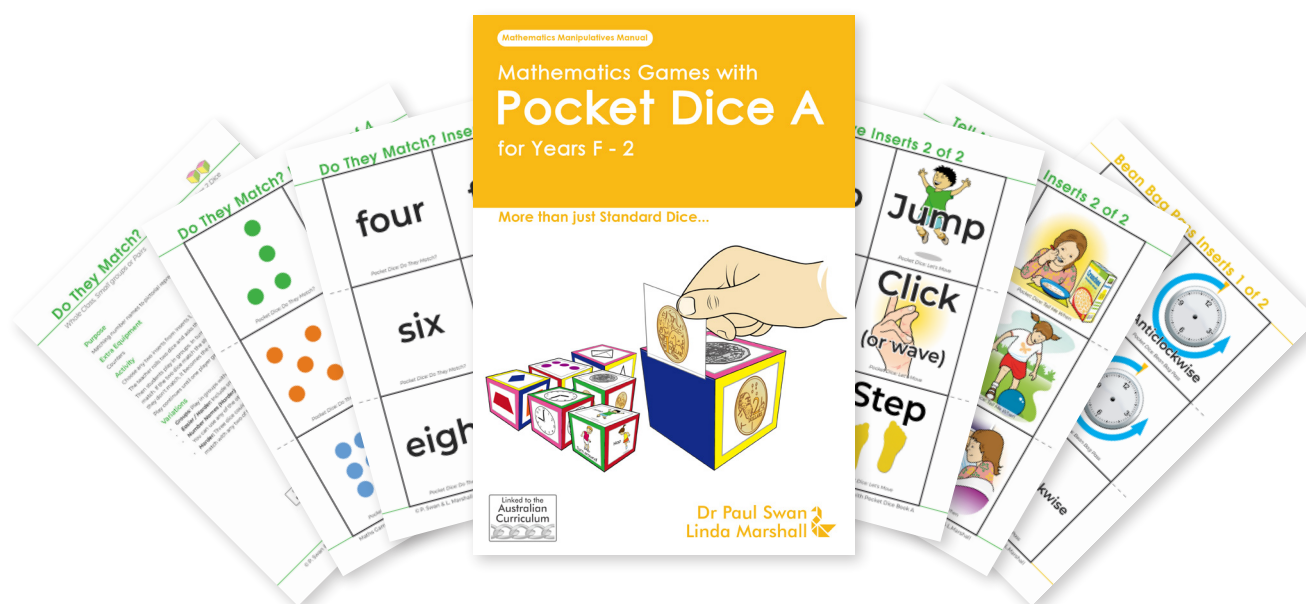
Pocket Dice are large, soft dice with clear pockets on all six faces.



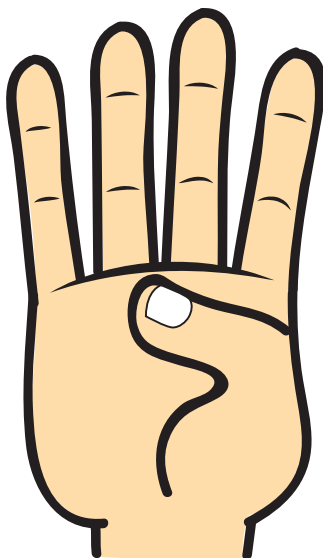
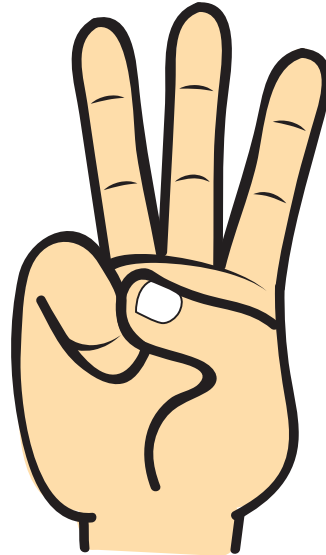
Specific designs vary, but generally each face measures 10 × 10 centimetres. Different inserts are placed in the pockets to provide an unlimited range of options. The dice can be used for whole class activities, or for small group or pairs work.

More Inserts and Activities

For more Pocket Dice activities and inserts suitable for use in Foundation to Year Two, see **Pocket Dice Book A** for sale at drpaulswan.com.au



Fingers (0 - 5)



Numbers (0 - 5)

0

1

2

3

4

5

Number Words (0 - 5)**zero****one****two****three****four****five**

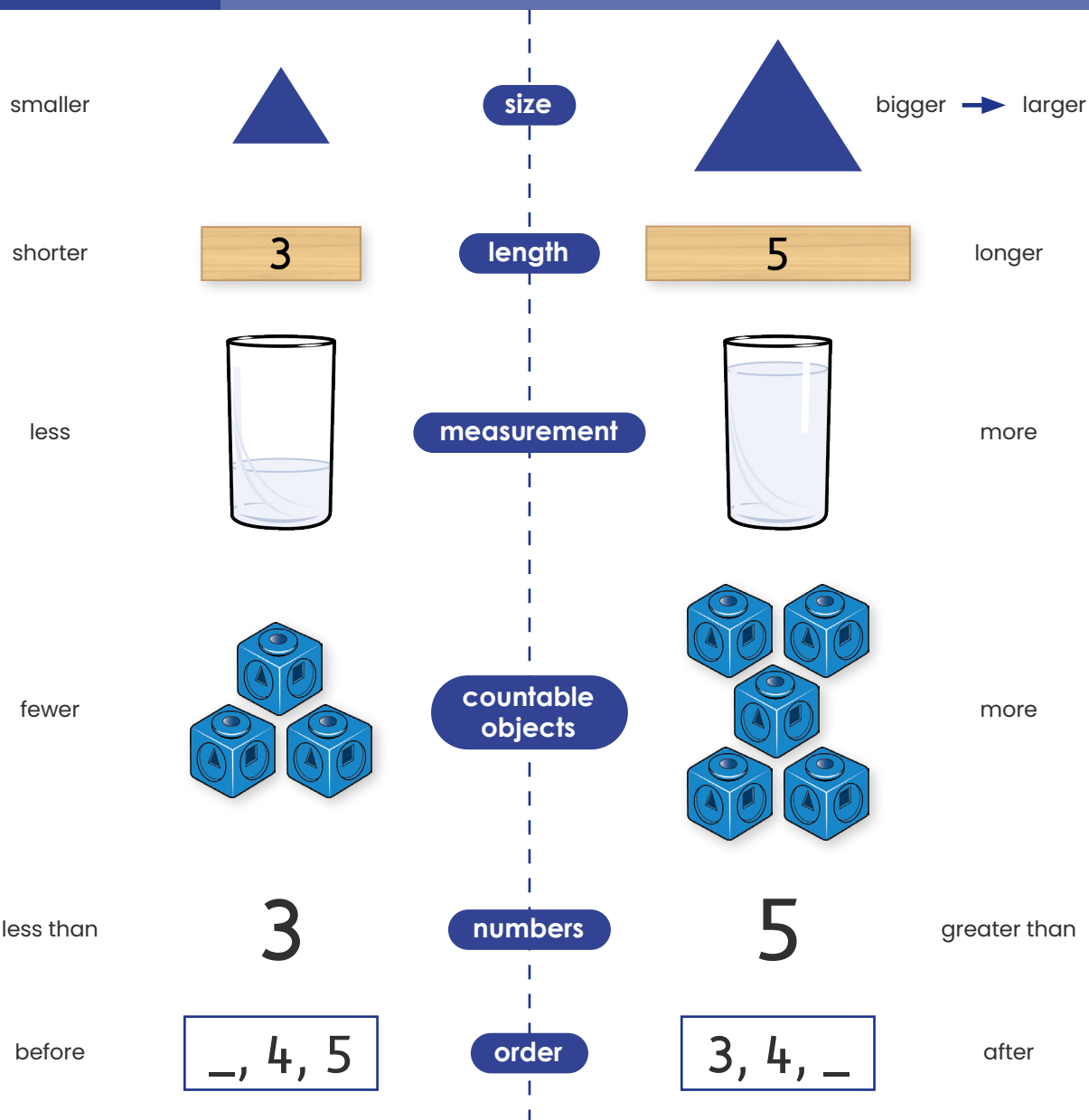
Number Board: Starting at One

Place linear Bond Blocks on this board to assist:

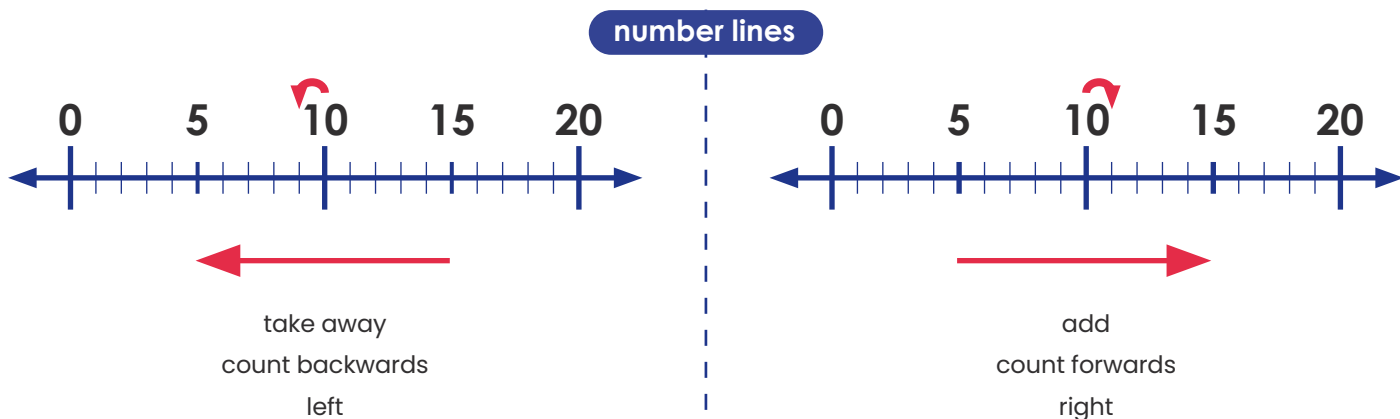
- Counting. For example, in fives and tens.
- Calculating. For example, $24 - 14$.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Comparison Language Chart



Developing the concept of which number is **worth more or less** is an essential component of number sense. For this reason, when **comparing numbers**, start with words the students understand such as '**bigger/smaller**'. However, mathematically these words describe size. When appropriate, introduce the mathematically correct words of "**less than**" and "**greater than**".



Part-Part-Whole:

Blank Cards



Part-Part-Whole

Equation: Recording Sheet

Name: _____

Date: _____

Whole	
Part	Part

Part + Part = Whole

Whole - Part = Part

Addition

Subtraction

Place Value Arrow Cards

1	0		2	0		0	
1	0		2	0		1	
1	0		2	0		2	
1	0		2	0		3	
1	0		2	0		4	
1	0		2	0		5	
1	0		2	0		6	
1	0		2	0		7	
1	0		2	0		8	
1	0		2	0		9	
			3	0		0	

Place Value Number Expanders

ones	ones	ones	ones	ones	ones
—	—	—	—	—	—
tens	tens	tens	tens	tens	tens
—	—	—	—	—	—
hundreds	hundreds	hundreds	hundreds	hundreds	hundreds
—	—	—	—	—	—

Ten Frame Cards

