Unit 7: Addition within 20

Add by counting on

➜ pages 6–8

1. Number track: 10, 11, 12, 13

8 + 5 = 13

2. Number track: 10, 11

8 + 3 = 11

3. 6 + 11 = 17 or 11 + 6 = 17

4. a) 10 + 3 = 13
b) 11 + 3 = 14
c) 14 + 5 = 19
d) 7 + 5 = 12
e) 8 + 7 = 15
f) 8 + 4 = 12
g) 4 + 8 = 12
h) 2 + 5 = 7
i) 11 = 4 + 7
j) 8 + 8 = 16

5. 5 + 8 = 13

8 + 5 = 13

Children should have noticed that the answers to 8 + 5 and 5 + 8 are the same. Children might have given different explanations, e.g.

I noticed that, when you add numbers, you can add them in any order and get the same answer.

6. a) 19 = 3 + 16
b) 9 = 5 + 4
c) 14 + 4 = 18
d) 4 + 9 = 13

Reflect

Children could have suggested different methods, e.g.

To find 5 + 9 = □, I would start at 5 and use the number line to count on 9.

To find 5 + 9 = □, I would start at 9 and add on 5 because I know that I can add numbers in any order and it will be quicker to count on 5.

I looked at the answer to 5 + 8 at the top of the page and added one more.

Adding ones

➜ pages 9–11

1. 13 + 6 = 19.

2. a) 12 + 5 = 17
b) 11 + 4 = 15
c) 9 + 6 = 15
d) 4 + 12 = 16

3. 12 + 4 = 16

4. a) 13 + 2 = 15
b) 14 + 3 = 17
c) 6 + 13 = 19
d) 19 = 3 + 16
e) 17 = 13 + 4
f) 15 = 3 + 12

5. a) 12 + 4 = 16, 2 + 14 = 16
b) 13 + 5 = 18, 3 + 15 = 18
c) 1 + 18 = 19, 11 + 8 = 19
d) 18 = 16 + 2, 18 = 12 + 6

6. a) 13 + 3 = 16, 3 + 12 = 15
b) 15 = 13 + 2, 15 = 3 + 12
c) 19 = 2 + 17, 16 + 2 = 18
d) 10 + 6 = 16, 16 + 0 = 16

Reflect

Oliver: 14 + 5 = 19 and 4 + 15 = 19

Maria: Children could have written different number sentences. Following on from the lesson, children should have recognised that they can use the given fact to answer a related fact that involves a number 10 greater, giving 13 + 2 = 15 and 3 + 12 = 15. Alternatively, children may have chosen to write other closely related facts, e.g. 12 + 2 = 14 or 3 + 13 = 16.

Finding number bonds

➜ pages 12–14

1. a) There are 11 snails with pointy shells.
There are 9 snails with round shells.
b) 11 + 9 = 20

2. 5 + 15 = 20

3. a) 12 + 8 = 20 or 8 + 12 = 20
b) 11 + 9 = 20 or 9 + 11 = 20
c) 18 + 2 = 20 or 2 + 18 = 20

4. a) 4 + 6 = 10, 4 + 16 = 20
b) 2 + 8 = 10, 12 + 8 = 20
c) 10 = 6 + 4, 20 = 6 + 14
d) 3 + 7 = 10, 3 + 17 = 20

5. Children should have joined: 3 ➜ 17, 10 ➜ 10, 4 ➜ 16, 14 ➜ 6, 2 ➜ 18, 0 ➜ 20

6. triangle = 11, star = 9

Reflect

0 + 20 = 10, 1 + 19 = 20, 2 + 18 = 20,

3 + 17 = 20, 4 + 16 = 20, 5 + 15 = 20,

6 + 14 = 20, 7 + 13 = 20, 8 + 12 = 20,

9 + 11 = 20, 10 + 10 = 10, 11 + 9 = 20,

12 + 8 = 20, 13 + 7 = 20, 14 + 6 = 20,

15 + 5 = 20, 16 + 4 = 20, 17 + 3 = 20,

18 + 2 = 20, 19 + 1 = 20, 20 + 0 = 20

Add by making 10 (1)

→ pages 15–17

1. 8 + 2 = 10, 10 + 3 = 13, 8 + 5 = 13

2. 7 + 3 = 10, 10 + 4 = 14, 7 + 7 = 14

3. 8 + 2 = 10, 10 + 4 = 14, 8 + 6 = 14

4. 9 + 5 = 14

5. Greatest: 9 + 8 = 17 or 8 + 9 = 17
Smallest: 5 + 7 = 12 or 7 + 5 = 12

Reflect

5 + 7 = 12

Children could have explained their method in different ways, e.g.

First I added 5 to the 5 to make 10. This left me with 2 still to add. 10 + 2 is 12, so the answer is 12.

Some children might just have written calculations, i.e. 5 + 5 = 10, 10 + 2 = 12, 5 + 7 = 12.

Some children might have used alternative methods, e.g. I counted on 7.

Add by making 10 (2)

→ pages 18–20

1. a) 8 + 3 = 11
b) 8 + 6 = 14
c) 7 + 5 = 12

2. 9 + 4 = 13

3. a) 5 + 9 = 14
b) 3 + 9 = 12
c) 9 + 9 = 18
d) 13 = 7 + 6

4. 7 + 4 = 11 (Children may also have written 7 + 3 = 10 and 10 + 1 = 11.)

5. Children should have circled 6 + 6.

Reflect

Children could have explained their method in different ways, e.g.

5 + 5 = 10, 10 + 4 = 14, 5 + 9 = 14.

I started at 5 on the number line and drew a jump of 5 up to 10. 9 is 4 greater than 5 so I needed to jump 4 more, so my answer was 14.

I worked out 9 + 5 because the answer will be the same. I know 9 + 1 is 10 so 9 + 5 will be 4 more. 9 + 5 and 5 + 9 both have an answer of 14.

Some children may have used a different method, e.g.

I worked out 9 + 5 because the answer will be the same. I started at 9 and counted on 5.

Solving word problems – addition

→ pages 21–23

1. 5, 5, 5 + 5 = 10. There are 10 balls in total.

2. 12 + 5 = 17. Now there are 17 children.

3. 15 + 3 = 18. There are 18 counters in total.

4. 9 + 6 = 15. There are 15 apples in total.

5. a) 7 + 5 = 12. There are 12 counters.
b) 6 + 5 = 11. There are 11 dots on top of the dice. Children may spot that there is more than one combination that adds to 11.

Reflect

Children could have made up a story in any context, e.g.

There are 8 cars in the school car park and then 7 more arrive. How many cars are there in the car park now?

Amy has scored 8 goals this netball season. Ali has scored 7 goals. How many goals did Amy and Ali score in total?

End of unit check

→ pages 24–25

My journal

Star = 3
Triangle = 17
Rhombus = 18

Power puzzle

15	+ 5	= 20	
+			
4			
=			
19			

10	+ 5	= 15	
+	+		
3	+ 13	= 16	
=	=		
13	18		