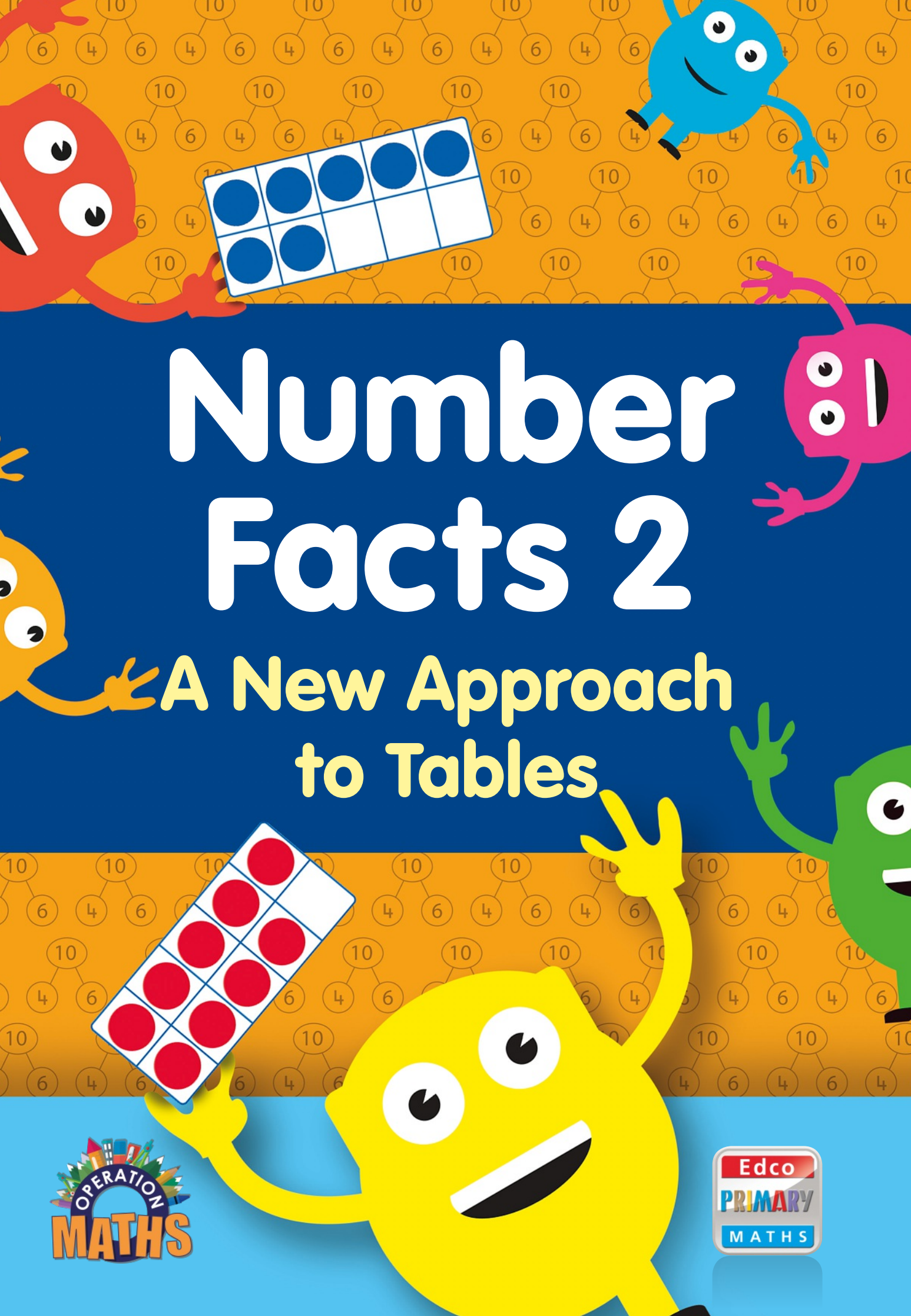
Number Facts 2

A New Approach to Tables



OPERATION MATHS

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Introduction for Teachers, Parents and Guardians

Number Facts is a new series of activity books designed to foster fluency in number facts (or 'tables') for primary school children from First Class. The series features an innovative approach to the acquisition of basic number facts, and teaches children to *understand*, not just *do*, maths.

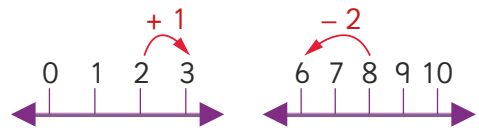
Traditionally, learning tables was by rote, but current research suggests that this is ineffective for the majority of children. In contrast, ***Number Facts*** teaches children to visualise numbers and to use images and thinking strategies *to use what they know to solve what they do not know.*

Thinking strategies

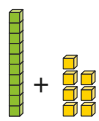
A thinking strategy is a way to think about a process to arrive efficiently at an answer. The thinking strategies that children will learn in ***Number Facts 2*** are outlined below. It is important that children realise that there can often be many different ways to think about the same fact, so they should be encouraged both to identify alternative approaches and to choose their preferred strategy.

(a) Number bonds of 10 and 20 Through concrete and pictorial experiences, children are enabled to identify and remember the different pairs of numbers that combine to make up the numbers 10 and 20. E.g. the number bonds of 10 include: 0 + 10; 1 + 9; 2 + 8, etc.

(b) Adding and subtracting 1, 2 and 3 Most young children can mentally **count on and back** one, two or three numbers, but counting on or back more than this can be difficult and inefficient.



(c) Adding and subtracting 10 Children are enabled to understand that the numbers 11 to 19 are made up of **a ten and some units**, e.g. 17 = 1 ten + 7 units = 10 + 7.

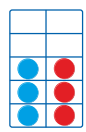


(d) Adding and subtracting 9 If 10 + 7 = 17, then 9 + 7 = 16 (one less). Similarly, if 17 – 10 = 7, then 17 – 9 = 8 (one more).
Also, children can try to **make a ten**, e.g.
move 1
9 + 7 → 10 + 6 = 16.

(e) Adding and subtracting 8 and 7 Similar to adding and subtracting 9, the children can **make a ten**.
move 2
8 + 7 → 10 + 5 = 15.
move 3
7 + 6 → 10 + 3 = 13.

(f) Adding and subtracting with zero When you add zero to or subtract zero from a number, **the number does not change**.
4 + 0 = **4**
4 – 0 = **4**

(g) Doubles Through concrete and pictorial experiences, children are enabled to identify doubles from their **shapes**. E.g. 3 + 3 = 6.

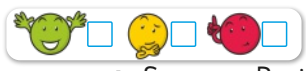


(h) Near doubles If 6 + 6 = 12, then 6 + 7 = 13 (one more). Similarly, if 9 + 9 = 18, then 9 + 8 = 17 (one less).

(i) Adding and subtracting 5 The extensive use of a ten frame enables children to visualise these facts. E.g. the number 9 displayed on a ten frame comprises 5 on the top row and 4 on the bottom row. Therefore, 9 = 5 + 4.

(j) Adding and subtracting 6 and 4
If 5 + 4 = 9, then 6 + 4 = 10 (one more) and 4 + 4 = 8 (one less).

Features of the series

- Each weekly unit includes activities for Monday to Thursday.
- **Challenge** Most days include a Challenge section to extend the more able children.
- **Self-assessment** Children can assess their own learning at the end of every week by ticking the appropriate icon:  .
- **Revision and Assessment** Separate Revision and Assessment sections are included at the back of the book for completion at regular intervals. A note at the foot of the page directs teachers and children to the appropriate section.
- **Personal Progress Chart** Children can record their assessment scores in this chart at the back of the book.
- **Family Card Games** Parents and children can play these card games at home to reinforce the number facts taught in each unit. The page footers indicate which game should be played for each unit.

Note: traditionally, learning tables was emphasised for numbers up to 10 + 10. However, the thinking strategies approach used in this book enables children to apply these mental computation skills to numbers beyond this traditional ceiling, e.g. 23 + 9, 46 + 9, etc.

Contents

Unit	Lesson	Pages
1	Number bonds of 10	2–3
2	Add 1	4–5
3	Add 2	6–7
4	Subtract 1	8–9
5	Subtract 2	10–11
6	Add 10	12–13
7	Subtract 10	14–15
8	Zero	16–17
9	Doubles	18–19
10	Add 5	20–21
11	Subtract 5	22–23
12	Add 9	24–25
13	Subtract 9	26–27
14	Near doubles	28–29
15	Add 6	30–31
16	Subtract 6	32–33
17	Add 4	34–35
18	Subtract 4	36–37
19	Number bonds of 20	38–39
20	In-between doubles	40–41
21	Add 8	42–43
22	Subtract 8	44–45
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27	Halves	54–55
28	Groups of 10	56–57
	Revision	58–65
	Assessments	66–69
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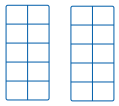
3 Add 2

MONDAY

1 Use your  and .

(a) 10 add 2 = ☐

(b) 6 add 2 = ☐

(c) 1 add 2 = ☐

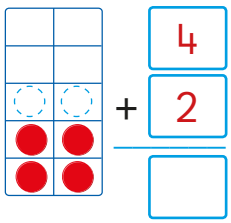
(d) 2 add 2 = ☐

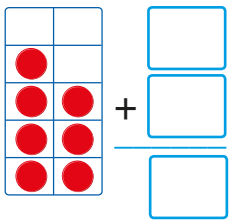
(e) 0 add 2 = ☐

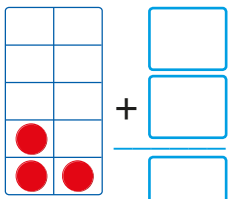
(f) 9 plus 2 = ☐

(g) 7 plus 2 = ☐

2 Draw 2 more counters. Write the matching number sentences.

(a) 
4 + 2 = ☐

(b) 
☐ + ☐ = ☐

(c) 
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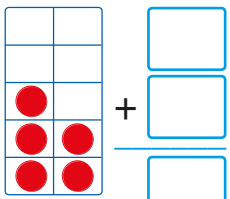
(d) 
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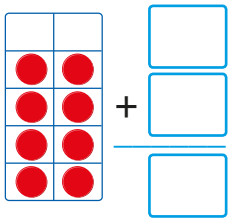
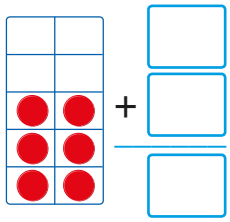
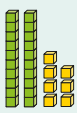
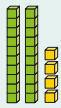
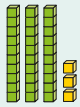
(e) 
☐ + ☐ = ☐

(f) 
☐ + ☐ = ☐

3 **Challenge** Draw 2 more cubes. Write the number sentences.

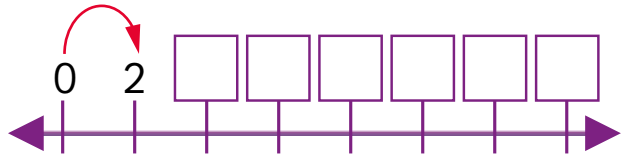
(a) 
☐ + 2 = ☐

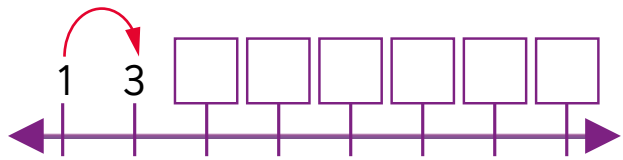
(b) 
☐ + ☐ = ☐

(c) 
☐ + ☐ = ☐

TUESDAY

1 Count on in twos.

(a) 

(b) 

2 (a) 8 add 2 = ☐

(b) 3 add 2 = ☐

(c) 10 plus 2 = ☐

(d) 1 plus 2 = ☐

(e) 0 + 2 = ☐

(f) 6 + 2 = ☐

(g) 2 + 2 = ☐

Think: what number is 2 more than 8?

3 (a) 2 add 10 = ☐

(b) 2 add 9 = ☐

(c) 2 plus 8 = ☐

(d) 2 plus 0 = ☐

(e) 2 + 7 = ☐

(f) 2 + 4 = ☐

(g) 2 + 6 = ☐

Think: count on from the bigger number.

4 **Challenge**

(a) 23 + 2 = ☐

(b) 34 + 2 = ☐

(c) 2 + 48 = ☐

(d) 2 + 59 = ☐

Think:
3 + 2 = ?, so
23 + 2 = ?

Thinking Strategy • Count on 2. • Go to the next even/odd number.

WEDNESDAY

1

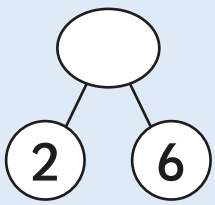
(a) 3 + 2 = ☐
(b) 2 + 6 = ☐
(c) 2 + 1 = ☐
(d) 4 + 2 = ☐
(e) 2 + 7 = ☐
(f) 5 + 2 = ☐
(g) 0 + 2 = ☐
(h) 10 + 2 = ☐
(i) 2 + 9 = ☐
(j) 8 + 2 = ☐

Think: count on from the bigger number.

2

(a) ☐ = 2 + 6
(b) ☐ = 0 + 2
(c) ☐ = 2 + 1
(d) ☐ = 4 + 2
(e) ☐ = 2 + 7
(f) ☐ = 5 + 2
(g) ☐ = 2 + 8
(h) ☐ = 10 + 2
(i) ☐ = 2 + 9
(j) ☐ = 2 + 2

Think: what number is the sum of 2 and 6?



3 Challenge

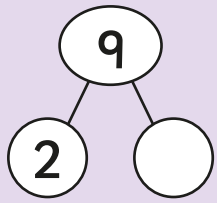
(a) 19 + 2 = ☐
(b) 2 + 28 = ☐
(c) ☐ = 37 + 2
(d) ☐ = 44 + 2

THURSDAY

1

(a) 2 + ☐ = 9
(b) ☐ + 2 = 4
(c) 2 + ☐ = 2
(d) ☐ + 2 = 11
(e) 2 + ☐ = 8
(f) ☐ + 2 = 12
(g) 2 + ☐ = 5
(h) ☐ + 2 = 10
(i) 2 + ☐ = 3
(j) ☐ + 2 = 7

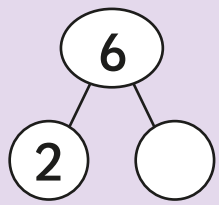
Think: 2 and what number equals 9?



2

(a) 6 = 2 + ☐
(b) 9 = ☐ + 2
(c) 5 = 2 + ☐
(d) 4 = ☐ + 2
(e) 10 = 2 + ☐
(f) 3 = ☐ + 2
(g) 7 = 2 + ☐
(h) 11 = ☐ + 2
(i) 2 = 2 + ☐
(j) 12 = ☐ + 2

Think: 6 is the sum of 2 and what number?



3 Challenge

(a) 2 + ☐ = 17
(b) ☐ + 2 = 25
(c) 46 = 2 + ☐
(d) 51 = ☐ + 2

Think:
2 + ? = 7, so
2 + ? = 17.

5 Subtract 2

MONDAY

1 Use your ▦ ▦ and ●●●. Subtract.

(a) 3 ● subtract 2 = ☐

(b) 12 ● subtract 2 = ☐

(c) 4 ● subtract 2 = ☐

(d) 11 ● subtract 2 = ☐

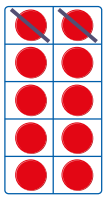
(e) 5 ● minus 2 = ☐

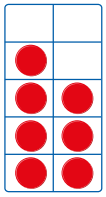
(f) 9 ● minus 2 = ☐

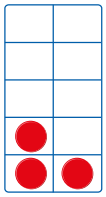
(g) 7 ● minus 2 = ☐

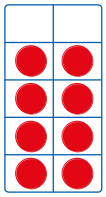
(h) 2 ● minus 2 = ☐

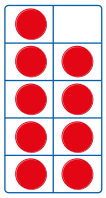
2 How many counters? Subtract 2.

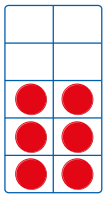
(a)  10 − 2 = ☐

(b)  ☐ − ☐ = ☐

(c)  ☐ − ☐ = ☐

(d)  ☐ − ☐ = ☐

(e)  ☐ − ☐ = ☐

(f)  ☐ − ☐ = ☐

3 **Challenge** Count back.

(a) 12, 10, 8, ☐, ☐, ☐, ☐

(b) 13, 11, 9, ☐, ☐, ☐, ☐

(c) 24, 22, 20, ☐, ☐, ☐, ☐

TUESDAY

1 How many dots? Subtract 2.

(a) 12 − 2 = ☐

(b) ☐ − ☐ = ☐

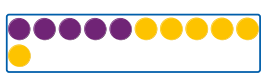
(c) ☐ − ☐ = ☐

(d) ☐ − ☐ = ☐

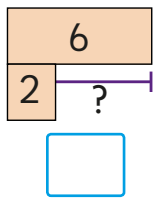
(e) ☐ − ☐ = ☐

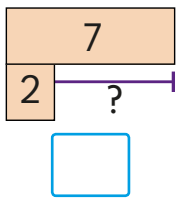
(f) ☐ − ☐ = ☐

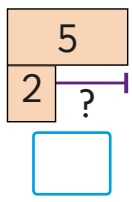
(g) ☐ − ☐ = ☐

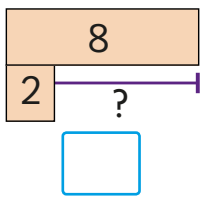
(h)  ☐ − ☐ = ☐

2 Complete the bars to show the difference.

(a) 

(b) 

(c) 

(d) 

3 What is the difference between:

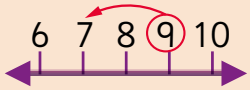
(a) 12 and 2? ☐ (b) 2 and 10? ☐

(c) 3 and 2? ☐ (d) 2 and 9? ☐

(e) 11 and 2? ☐ (f) 2 and 2? ☐

4 **Challenge** Imagine a number line. What number comes 2 before:

(a) 9? ☐ (b) 7? ☐ (c) 12? ☐



(d) 15? ☐ (e) 28? ☐

(f) 23? ☐ (g) 37? ☐

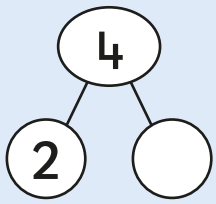
Thinking Strategy • Count back 2. • Go back to the previous even/odd number.

WEDNESDAY

1 (a) 7 subtract 2 = ☐
(b) 6 subtract 2 = ☐
(c) 5 subtract 2 = ☐
(d) 3 subtract 2 = ☐
(e) 12 subtract 2 = ☐
(f) 8 subtract 2 = ☐
(g) 10 subtract 2 = ☐
(h) 11 subtract 2 = ☐
(i) 4 subtract 2 = ☐
(j) 9 subtract 2 = ☐

2 (a) 4 – 2 = ☐
(b) 12 – 2 = ☐
(c) 11 – 2 = ☐
(d) 9 – 2 = ☐
(e) 3 – 2 = ☐
(f) 7 – 2 = ☐
(g) 6 – 2 = ☐
(h) 10 – 2 = ☐
(i) 8 – 2 = ☐
(j) 5 – 2 = ☐

Think: 4 subtract 2 equals what number?



3 Challenge
(a) 28 subtract 2 = ☐
(b) 43 minus 2 = ☐
(c) 51 – 2 = ☐
(d) 70 – 2 = ☐

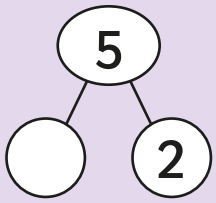
THURSDAY

1 (a) 9 – 2 = ☐
(b) 4 – 2 = ☐
(c) 11 – 2 = ☐
(d) 7 – 2 = ☐
(e) 2 – 2 = ☐
(f) 6 – 2 = ☐
(g) 3 – 2 = ☐
(h) 8 – 2 = ☐
(i) 5 – 2 = ☐
(j) 10 – 2 = ☐

Think: what number comes 2 before 9?

2 (a) 5 – ☐ = 2
(b) 10 – ☐ = 2
(c) 12 – ☐ = 2
(d) 2 – ☐ = 2
(e) 9 – ☐ = 2
(f) 8 – ☐ = 2
(g) 11 – ☐ = 2
(h) 3 – ☐ = 2
(i) 6 – ☐ = 2
(j) 7 – ☐ = 2

Think: 5 subtract what number equals 2?



Or think: what number plus 2 equals 5?

3 Challenge What is the difference between:

(a) 28 and 2? ☐ (b) 2 and 35? ☐
(c) 2 and 46? ☐ (d) 59 and 2? ☐
(e) 61 and 2? ☐ (f) 2 and 71? ☐

Dear Family Play 'Subtract Snap with 2' (see page 70).

6 Add 10

MONDAY

1 Use your ▦ ▦ and ●●●.

(a) 10 ● add 7 ● = ☐

(b) 10 ● add 2 ● = ☐

(c) 10 ● add 9 ● = ☐

(d) 10 ● add 1 ● = ☐

(e) 10 ● add 3 ● = ☐

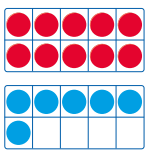
(f) 10 ● add 10 ● = ☐

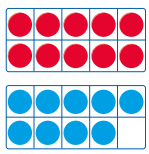
(g) 10 ● add 0 ● = ☐

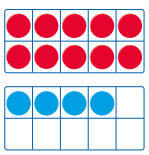
(h) 10 ● add 5 ● = ☐

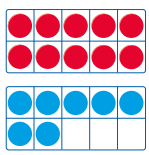
(i) 10 ● add 6 ● = ☐

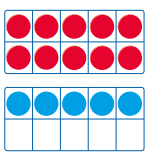
2 How many counters in each ▦? Write the number sentences.

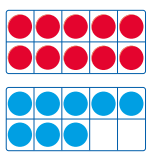
(a)  10 + 6 = ☐

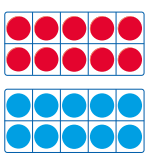
(b)  ☐ + ☐ = ☐

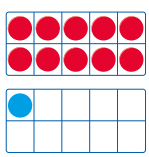
(c)  ☐ + ☐ = ☐

(d)  ☐ + ☐ = ☐

(e)  ☐ + ☐ = ☐

(f)  ☐ + ☐ = ☐

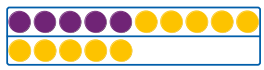
(g)  ☐ + ☐ = ☐

(h)  ☐ + ☐ = ☐

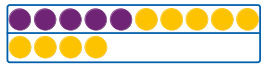
TUESDAY

1 How many dots in each row? Write the number sentences.

(a) 10 + 2 = ☐

(b)  ☐ + ☐ = ☐

(c) ☐ + ☐ = ☐

(d)  ☐ + ☐ = ☐

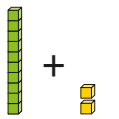
(e) ☐ + ☐ = ☐

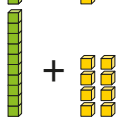
(f) ☐ + ☐ = ☐

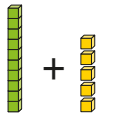
(g) ☐ + ☐ = ☐

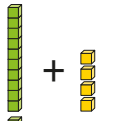
(h) ☐ + ☐ = ☐

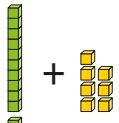
2 Write the matching number sentences.

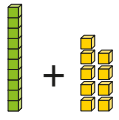
(a)  10 + 2 = ☐

(b)  ☐ + ☐ = ☐

(c)  ☐ + ☐ = ☐

(d)  ☐ + ☐ = ☐

(e)  ☐ + ☐ = ☐

(f)  ☐ + ☐ = ☐

3 Challenge

(a) 27 + 10 = ☐

(b) 31 + 10 = ☐

(c) 10 + 54 = ☐

(d) 10 + 72 = ☐

Think:
7 + 10 = ?, so
27 + 10 = ?

Thinking Strategy Add a ten, e.g. 10 + 7 → 1 ten + 7 units = 17.

WEDNESDAY

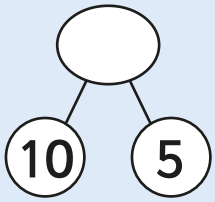
1

(a) 10 + 7 = ☐
(b) 3 + 10 = ☐
(c) 0 + 10 = ☐
(d) 2 + 10 = ☐
(e) 10 + 5 = ☐
(f) 4 + 10 = ☐
(g) 10 + 8 = ☐
(h) 10 + 6 = ☐
(i) 1 + 10 = ☐
(j) 10 + 9 = ☐

2

(a) ☐ = 10 + 5
(b) ☐ = 2 + 10
(c) ☐ = 10 + 6
(d) ☐ = 3 + 10
(e) ☐ = 10 + 8
(f) ☐ = 10 + 10
(g) ☐ = 10 + 7
(h) ☐ = 10 + 9
(i) ☐ = 0 + 10
(j) ☐ = 10 + 4

Think: what number is the sum of 10 and 5?



3 Challenge

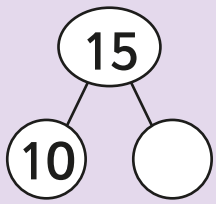
(a) 34 + 10 = ☐
(b) 10 + 27 = ☐
(c) ☐ = 10 + 46
(d) ☐ = 70 + 10

THURSDAY

1

(a) 10 + ☐ = 15
(b) ☐ + 10 = 14
(c) 10 + ☐ = 17
(d) ☐ + 10 = 10
(e) 10 + ☐ = 19
(f) ☐ + 10 = 20
(g) 10 + ☐ = 12
(h) ☐ + 10 = 11
(i) 10 + ☐ = 13
(j) ☐ + 10 = 18

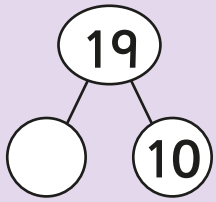
Think: 10 and what number equals 15?



2

(a) 19 = ☐ + 10
(b) 20 = 10 + ☐
(c) 16 = ☐ + 10
(d) 14 = 10 + ☐
(e) 13 = ☐ + 10
(f) 11 = 10 + ☐
(g) 15 = ☐ + 10
(h) 18 = 10 + ☐
(i) 10 = ☐ + 10
(j) 17 = 10 + ☐

Think: 19 is the sum of what number and 10?



3 Challenge

(a) 10 + ☐ = 23
(b) ☐ + 10 = 35
(c) 46 = ☐ + 10
(d) 81 = 10 + ☐

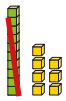
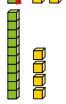
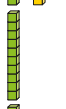
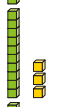
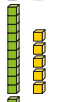
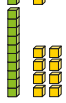
13 Subtract 9

MONDAY

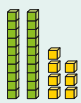
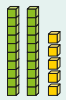
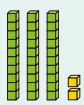
1 Use your ▦ and ●●●. Is there a quick way to subtract 9?

(a) 14 ● subtract 9 = ☐
(b) 16 ● subtract 9 = ☐
(c) 11 ● subtract 9 = ☐
(d) 17 ● subtract 9 = ☐
(e) 15 ● subtract 9 = ☐
(f) 18 ● subtract 9 = ☐
(g) 9 ● subtract 9 = ☐
(h) 19 ● subtract 9 = ☐
(i) 12 ● subtract 9 = ☐

2 How many cubes? Subtract 9.

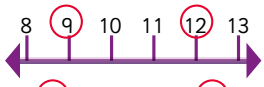
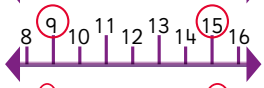
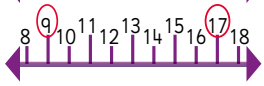
(a)  ☐ − 9 = ☐
(b)  ☐ − ☐ = ☐
(c)  ☐ − ☐ = ☐
(d)  ☐ − ☐ = ☐
(e)  ☐ − ☐ = ☐
(f)  ☐ − ☐ = ☐

3 **Challenge** How many cubes? Subtract 9.

(a)  ☐ − 9 = ☐
(b)  ☐ − ☐ = ☐
(c)  ☐ − ☐ = ☐

TUESDAY

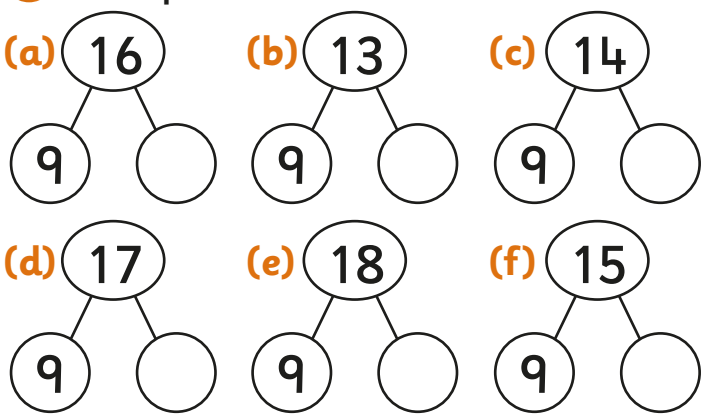
1 Use the number lines to find the difference.

(a) 14 − 9 = ☐
(b)  ☐ − 9 = ☐
(c)  ☐ − 9 = ☐
(d)  ☐ − 9 = ☐

2 What is the difference between:

(a) 11 and 9? ☐
(b) 9 and 18? ☐
(c) 13 and 9? ☐
(d) 9 and 10? ☐
(e) 19 and 9? ☐
(f) 9 and 16? ☐

3 Complete the number bonds.



4 **Challenge** What is the difference between:

(a) 27 and 9? ☐
(b) 9 and 35? ☐
(c) 42 and 9? ☐
(d) 56 and 9? ☐

Thinking Strategy • Take away 10 and then adjust (one more). • Use the inverse, e.g. 9 + ? = 13, so 13 − 9 = ...

WEDNESDAY

1 How many dots? Subtract 9.

(a) 13 – 9 = ☐

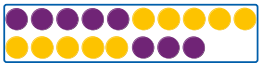
(b) ☐ – ☐ = ☐

(c) ☐ – ☐ = ☐

(d) ☐ – ☐ = ☐

(e) ☐ – ☐ = ☐

(f) ☐ – ☐ = ☐

(g)  ☐ – ☐ = ☐

(h) ☐ – ☐ = ☐

2

(a) 9 subtract 9 = ☐

(b) 19 subtract 9 = ☐

(c) 17 subtract 9 = ☐

(d) 11 subtract 9 = ☐

(e) 14 minus 9 = ☐

(f) 13 minus 9 = ☐

(g) 15 minus 9 = ☐

(h) 10 minus 9 = ☐

(i) 12 minus 9 = ☐

Think:
to subtract 9, subtract 10 and then adjust.

3 **Challenge** Use your 100 Square to find a pattern.

(a) 34 subtract 9 = ☐

(b) 85 minus 9 = ☐

(c) 78 minus 9 = ☐

(d) 63 subtract 9 = ☐

THURSDAY

1

(a) 19 – 9 = ☐

(b) 9 – 9 = ☐

(c) 14 – 9 = ☐

(d) 16 – 9 = ☐

(e) 11 – 9 = ☐

(f) 12 – 9 = ☐

(g) 17 – 9 = ☐

(h) 13 – 9 = ☐

(i) 18 – 9 = ☐

(j) 15 – 9 = ☐

Think:
to subtract 9, first subtract 10 and then adjust.

2

(a) 18 – ☐ = 9

(b) 10 – ☐ = 9

(c) 9 – ☐ = 9

(d) 19 – ☐ = 9

(e) 12 – ☐ = 9

(f) 16 – ☐ = 9

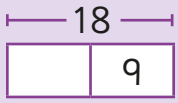
(g) 11 – ☐ = 9

(h) 15 – ☐ = 9

(i) 13 – ☐ = 9

(j) 17 – ☐ = 9

Think:
18 subtract what number equals 9?



Or think:
9 plus what number equals 18?

3 **Challenge**

(a) 27 – 9 = ☐

(b) 52 – ☐ = 9

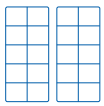
(c) 46 – ☐ = 9

(d) ☐ – 9 = 73

Think:
visualise the pattern on the 100 Square.

20 In-between doubles

MONDAY

1 Use your  and to show these. Move one to make doubles.

(a) 3 add 1 = ☐

(b) 8 add 10 = ☐

(c) 5 add 7 = ☐

(d) 6 add 4 = ☐

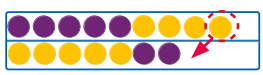
(e) 3 add 5 = ☐

(f) 8 add 6 = ☐

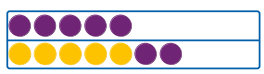
(g) 9 add 7 = ☐

(h) 2 add 4 = ☐

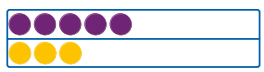
2 Move one to make doubles. Solve.

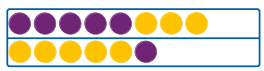
(a)  8 + 8 = ☐

(b) ☐ + ☐ = ☐

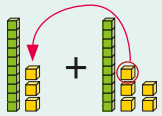
(c)  ☐ + ☐ = ☐

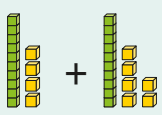
(d) ☐ + ☐ = ☐

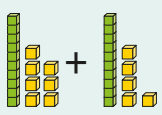
(e)  ☐ + ☐ = ☐

(f)  ☐ + ☐ = ☐

3 **Challenge** Move one to make doubles. Solve.

(a)  14 + 14 = ☐

(b)  ☐ + ☐ = ☐

(c)  ☐ + ☐ = ☐

TUESDAY

1 Use counters or cubes to show these. Move one to make doubles.

(a) 1 + 3 = 2 + 2 = ☐

(b) 8 + 10 = ☐ + ☐ = ☐

(c) 2 + 4 = ☐ + ☐ = ☐

(d) 5 + 7 = ☐ + ☐ = ☐

(e) 6 + 4 = ☐ + ☐ = ☐

(f) 7 + 9 = ☐ + ☐ = ☐

(g) 5 + 3 = ☐ + ☐ = ☐

(h) 8 + 6 = ☐ + ☐ = ☐

(i) 9 + 11 = ☐ + ☐ = ☐

2 (a) 3 + 5 = double 4 = 8

(b) 11 + 9 = double ☐ = ☐

(c) 2 + 4 = double ☐ = ☐

(d) 3 + 1 = double ☐ = ☐

(e) 8 + 10 = double ☐ = ☐

(f) 6 + 4 = double ☐ = ☐

(g) 9 + 7 = double ☐ = ☐

(h) 6 + 8 = double ☐ = ☐

(i) 7 + 5 = double ☐ = ☐

3 **Challenge**

(a) 3 + 5 = ☐, so 30 + 50 = ☐

(b) 6 + 8 = ☐, so 60 + 80 = ☐

(c) 7 + 9 = ☐, so 70 + 90 = ☐

(d) 5 + 7 = ☐, so 50 + 70 = ☐

Thinking Strategy Make doubles – balance the amounts by moving one from the greater to the lesser amount.

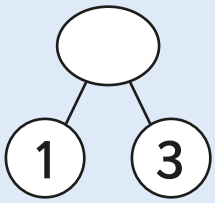
WEDNESDAY

1 (a) 2 + 4 = ☐
(b) 10 + 8 = ☐
(c) 0 + 2 = ☐
(d) 7 + 9 = ☐
(e) 3 + 5 = ☐
(f) 7 + 5 = ☐
(g) 8 + 6 = ☐
(h) 4 + 6 = ☐
(i) 1 + 3 = ☐
(j) 9 + 11 = ☐

Think: make doubles.

2 (a) ☐ = 1 + 3
(b) ☐ = 3 + 5
(c) ☐ = 10 + 8
(d) ☐ = 7 + 9
(e) ☐ = 4 + 6
(f) ☐ = 0 + 2
(g) ☐ = 11 + 9
(h) ☐ = 4 + 2
(i) ☐ = 5 + 7
(j) ☐ = 6 + 8

Think: what is the sum of 1 and 3?



3 Challenge
(a) 14 + 16 = ☐
(b) 22 + 24 = ☐
(c) ☐ = 33 + 35
(d) ☐ = 15 + 17

THURSDAY

1 (a) 9 + ☐ = 20
(b) 8 + ☐ = 14
(c) ☐ + 3 = 4
(d) 4 + ☐ = 10
(e) ☐ + 4 = 6
(f) 8 + ☐ = 18
(g) ☐ + 7 = 12
(h) 0 + ☐ = 2
(i) ☐ + 5 = 8
(j) 7 + ☐ = 16

Think: why do we call these 'In-between doubles'?

2 (a) 10 = 6 + ☐
(b) 2 = ☐ + 2
(c) 6 = 2 + ☐
(d) 4 = ☐ + 1
(e) 18 = 10 + ☐
(f) 8 = ☐ + 3
(g) 12 = 5 + ☐
(h) 14 = ☐ + 6
(i) 16 = 9 + ☐
(j) 20 = ☐ + 9

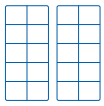
3 Challenge
(a) ☐ + 14 = 30
(b) 21 + ☐ = 40
(c) 50 = ☐ + 26
(d) 66 = 34 + ☐

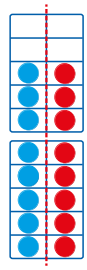
Dear Family Play 'Doubles Snap' (see page 70).

You are now ready to do Revision C (page 61).

27 Halves

MONDAY

1 Use  and to show halves.



(a) 8 🔵 and 8 🔴 = 16,
so half of 16 = ☐

(b) 10 🔵 and 10 🔴 = ☐,
so half of ☐ = ☐

(c) 5 🔵 and 5 🔴 = ☐,
so half of ☐ = ☐

(d) 6 🔵 and 6 🔴 = ☐,
so half of ☐ = ☐

(e) 9 🔵 and 9 🔴 = ☐,
so half of ☐ = ☐

(f) 7 🔵 and 7 🔴 = ☐,
so half of ☐ = ☐

2 Draw counters on the ten frames to show each number. Find half.

(a) 12 — 6

(b) 20 — ☐

(c) 16 — ☐

(d) 18 — ☐

(e) 14 — ☐

(f) 10 — ☐

TUESDAY

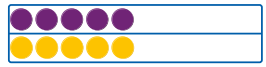
1 How many dots? Find half.

(a) Half of 14 = ☐

(b) Half of ☐ = ☐

(c) Half of ☐ = ☐

(d) Half of ☐ = ☐

(e)  Half of ☐ = ☐

(f) Half of ☐ = ☐

(g) Half of ☐ = ☐

(h) Half of ☐ = ☐

(i) Half of ☐ = ☐

(j) Half of ☐ = ☐

2 (a) Half of 18 = ☐

(b) Half of 2 = ☐

(c) Half of 8 = ☐

(d) Half of 12 = ☐

(e) Half of 4 = ☐

(f) Half of 20 = ☐

(g) Half of 6 = ☐

(h) Half of 16 = ☐

(i) Half of 10 = ☐

3 Challenge

(a) Half of ☐ = 9

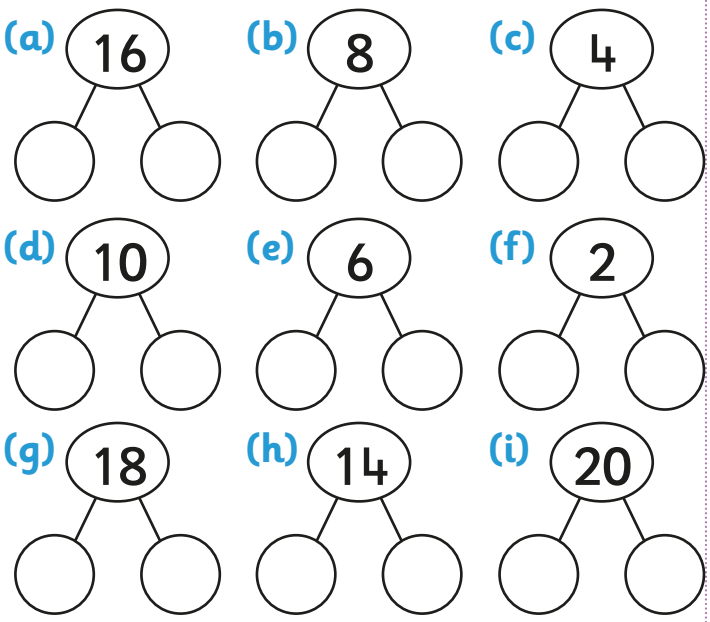
(b) Half of ☐ = 8

(c) Half of ☐ = 10

Thinking Strategy Halves are related to doubles, e.g. double 6 is 12, and half of 12 is 6.

WEDNESDAY

1 Complete the number bonds to show halves.



2 (a) Double 6 = ☐

(b) Double 1 = ☐

(c) Double 9 = ☐

(d) Double 5 = ☐

(e) Double 2 = ☐

(f) Double ☐ = 6

(g) Double ☐ = 16

(h) Double ☐ = 8

(i) Double ☐ = 20

(j) Double ☐ = 14

3 Challenge

(a) Double 20 = ☐

(b) Double 41 = ☐

(c) Double ☐ = 30

(d) Double ☐ = 80

THURSDAY

1 (a) $\frac{1}{2}$ of 14 = ☐

(b) $\frac{1}{2}$ of 6 = ☐

(c) $\frac{1}{2}$ of 4 = ☐

(d) $\frac{1}{2}$ of 20 = ☐

(e) $\frac{1}{2}$ of 16 = ☐

(f) $\frac{1}{2}$ of 8 = ☐

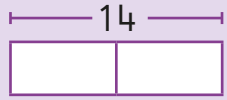
(g) $\frac{1}{2}$ of 2 = ☐

(h) $\frac{1}{2}$ of 12 = ☐

(i) $\frac{1}{2}$ of 10 = ☐

(j) $\frac{1}{2}$ of 18 = ☐

Think: double what number is 14?



2 (a) $\frac{1}{2}$ of ☐ = 8

(b) $\frac{1}{2}$ of ☐ = 3

(c) $\frac{1}{2}$ of ☐ = 4

(d) $\frac{1}{2}$ of ☐ = 5

(e) $\frac{1}{2}$ of ☐ = 7

(f) $\frac{1}{2}$ of ☐ = 2

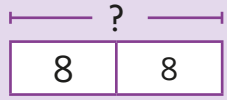
(g) $\frac{1}{2}$ of ☐ = 1

(h) $\frac{1}{2}$ of ☐ = 9

(i) $\frac{1}{2}$ of ☐ = 10

(j) $\frac{1}{2}$ of ☐ = 6

Think: double 8 is what number?



3 Challenge

(a) $\frac{1}{2}$ of 22 = ☐

(b) $\frac{1}{2}$ of 48 = ☐

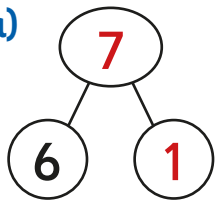
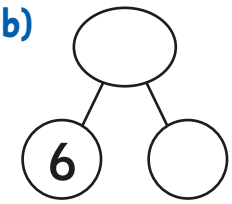
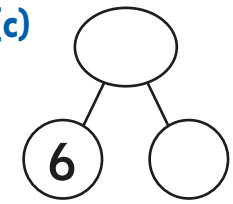
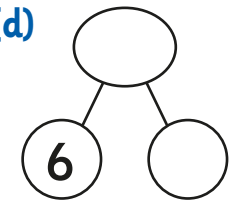
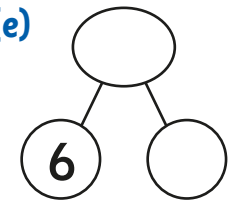
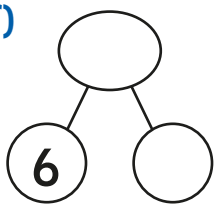
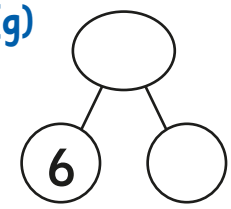
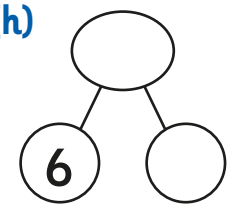
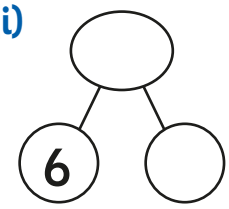
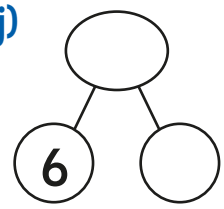
(c) $\frac{1}{2}$ of ☐ = 15

(d) $\frac{1}{2}$ of ☐ = 22

Dear Family Play 'Halves Snap' (see page 70).

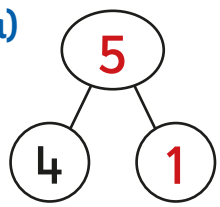
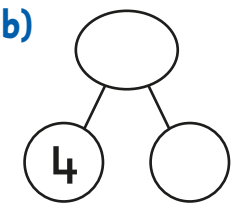
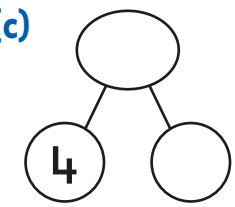
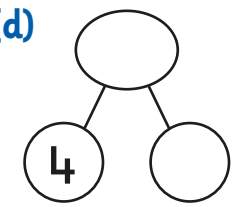
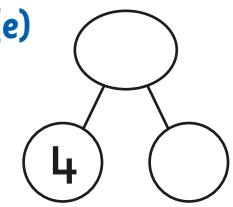
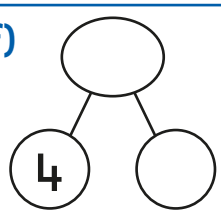
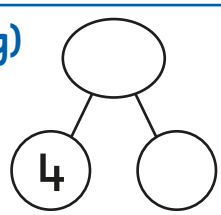
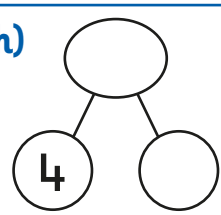
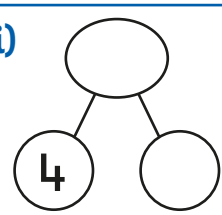
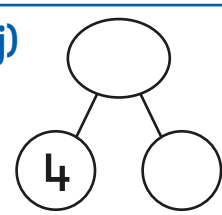
2 Adding and subtracting with 6

Complete the number bonds to show number facts with 6. Write the matching number sentences. The first one is done for you. You can write the number sentences for parts (f) to (j) in your copy.

(a)	(b)	(c)	(d)	(e)
				
6 + 1 = 7	+ =	+ =	+ =	+ =
1 + 6 = 7	+ =	+ =	+ =	+ =
7 − 6 = 1	− =	− =	− =	− =
7 − 1 = 6	− =	− =	− =	− =
(f)	(g)	(h)	(i)	(j)
				

3 Adding and subtracting with 4

Complete the number bonds to show number facts with 4. Write the matching number sentences. The first one is done for you. You can write the number sentences for parts (f) to (j) in your copy.

(a)	(b)	(c)	(d)	(e)
				
4 + 1 = 5	+ =	+ =	+ =	+ =
1 + 4 = 5	+ =	+ =	+ =	+ =
5 − 4 = 1	− =	− =	− =	− =
5 − 1 = 4	− =	− =	− =	− =
(f)	(g)	(h)	(i)	(j)
				

Assessment C (Units 14–20)

40

1

(a) 4 + 1 = ☐
(b) 8 + 7 = ☐
(c) 6 + 4 = ☐
(d) 7 + 9 = ☐
(e) 13 + 7 = ☐
(f) 4 + 9 = ☐
(g) 0 + 6 = ☐
(h) 1 + 19 = ☐
(i) 8 + 6 = ☐
(j) 5 + 4 = ☐

2

(a) 4 + ☐ = 8
(b) 2 + ☐ = 20
(c) 6 + ☐ = 15
(d) 4 + ☐ = 12
(e) 16 + ☐ = 20
(f) 6 + ☐ = 11
(g) 0 + ☐ = 4
(h) 8 + ☐ = 17
(i) 6 + ☐ = 7
(j) 7 + ☐ = 12

3

(a) 7 − 4 = ☐
(b) 20 − 15 = ☐
(c) 11 − 4 = ☐
(d) 8 − 3 = ☐
(e) 8 − 6 = ☐
(f) 19 − 9 = ☐
(g) 12 − 6 = ☐
(h) 3 − 1 = ☐
(i) 20 − 6 = ☐
(j) 16 − 6 = ☐

4

(a) 10 + 4 = ☐
(b) 3 − 1 = ☐
(c) 3 + 6 = ☐
(d) 20 − 9 = ☐
(e) 4 + 6 = ☐
(f) 6 − ☐ = 4
(g) 10 + ☐ = 18
(h) 20 − ☐ = 13
(i) 13 − ☐ = 6
(j) 2 + ☐ = 20

Assessment D (Units 21–26)

40

1

(a) 2 + 8 = ☐
(b) 8 + 6 = ☐
(c) 8 + 7 = ☐
(d) 7 + 4 = ☐
(e) 4 + 8 = ☐
(f) 7 + 3 = ☐
(g) 7 + 6 = ☐
(h) 3 + 6 = ☐
(i) 8 + 3 = ☐
(j) 3 + 4 = ☐

2

(a) 0 + ☐ = 8
(b) 3 + ☐ = 4
(c) 3 + ☐ = 6
(d) 7 + ☐ = 16
(e) 2 + ☐ = 9
(f) 7 + ☐ = 15
(g) 3 + ☐ = 11
(h) 7 + ☐ = 10
(i) 8 + ☐ = 16
(j) 3 + ☐ = 5

3

(a) 9 − 8 = ☐
(b) 7 − 0 = ☐
(c) 12 − 3 = ☐
(d) 12 − 7 = ☐
(e) 8 − 3 = ☐
(f) 11 − 8 = ☐
(g) 13 − 5 = ☐
(h) 8 − 7 = ☐
(i) 8 − 3 = ☐
(j) 15 − 7 = ☐

4

(a) 14 − 8 = ☐
(b) 3 + 8 = ☐
(c) 10 + ☐ = 17
(d) 13 − ☐ = 3
(e) 8 + 9 = ☐
(f) 14 − 7 = ☐
(g) 15 − ☐ = 8
(h) 7 + ☐ = 16
(i) 3 + 7 = ☐
(j) 18 − ☐ = 10

Assessment G (All units)

40

1

(a) $\frac{1}{2}$ of 18 = ☐
(b) 8 + 0 = ☐
(c) 1 + 6 = ☐
(d) 8 + 8 = ☐
(e) 6 tens = ☐
(f) 3 + 4 = ☐
(g) 1 + 10 = ☐
(h) 9 + 8 = ☐
(i) 4 + 2 = ☐
(j) 7 + 0 = ☐

2

(a) 7 + ☐ = 14
(b) 6 + ☐ = 11
(c) 10 + ☐ = 19
(d) 10 + ☐ = 20
(e) ☐ 10s = 80
(f) 6 + ☐ = 14
(g) 6 + ☐ = 20
(h) 2 + ☐ = 11
(i) $\frac{1}{2}$ of ☐ = 6
(j) 5 + ☐ = 10

3

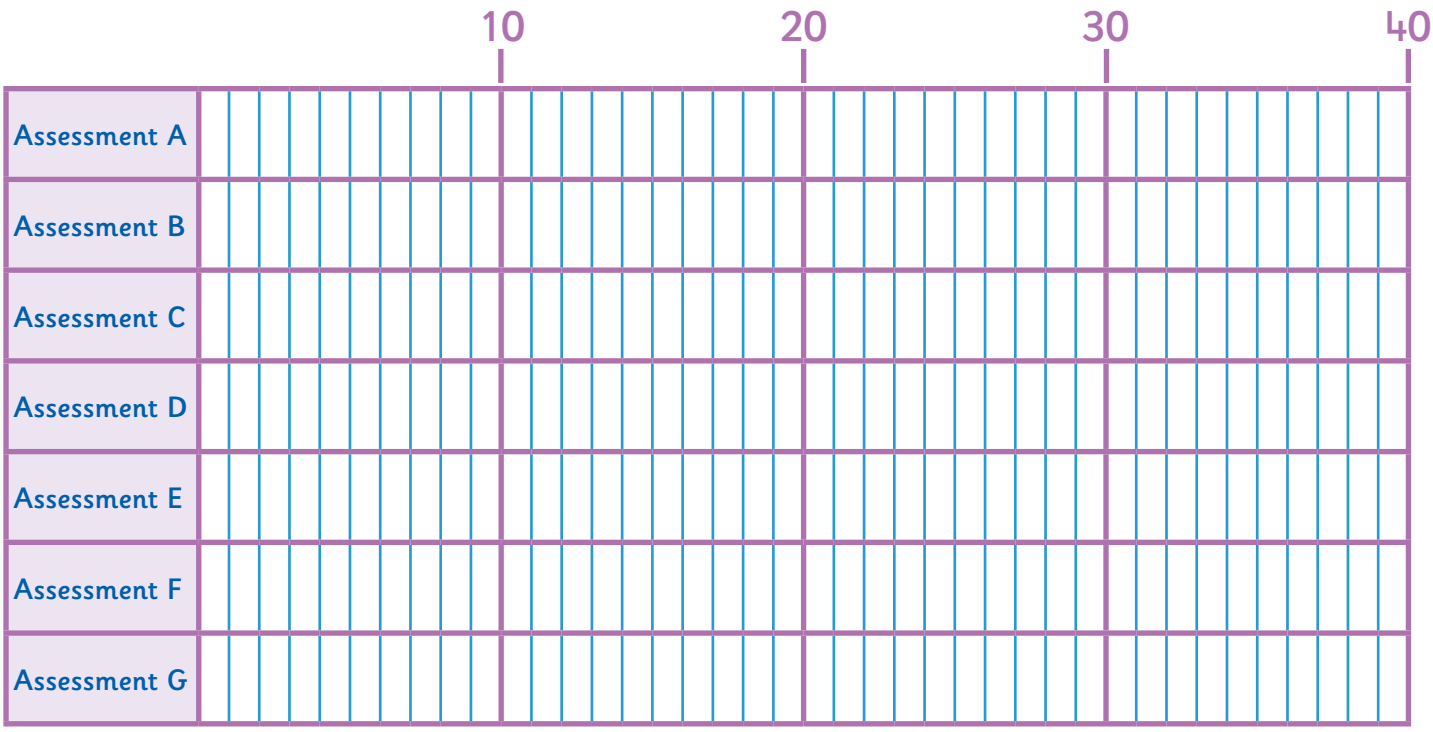
(a) $\frac{1}{2}$ of 14 = ☐
(b) 9 − 5 = ☐
(c) 12 − 9 = ☐
(d) 20 − 0 = ☐
(e) 5 tens = ☐
(f) 20 − 13 = ☐
(g) 12 − 6 = ☐
(h) 12 − 2 = ☐
(i) 10 − 7 = ☐
(j) 12 − 8 = ☐

4

(a) 6 − 6 = ☐
(b) 4 + 1 = ☐
(c) 20 − 1 = ☐
(d) 10 + 4 = ☐
(e) ☐ 10s = 20
(f) 9 − ☐ = 9
(g) 1 + ☐ = 8
(h) 5 + ☐ = 13
(i) $\frac{1}{2}$ of ☐ = 3
(j) 5 + ☐ = 8

Personal Progress Chart

Colour the correct number of squares to show your score.



Family Card Games

Make 10

Use a pack of cards with the kings and queens removed. Jacks are worth zero. Lay out the cards in four rows of 11, face down. The players take turns to turn over two cards. If the two cards total 10, the player gets to keep the cards. If not, the cards are returned to their original position. Play continues until all the cards are gone. The winner is the player with the most cards.

Make 20

Play as per **Make 10**, but the players turn over three cards each time, and the cards must total 20. Play continues until all the cards are gone or until there are no cards remaining that make 20.

Add Snap with 1/2/3 . . .

To play **Add Snap with 1**, remove one of the '1' cards from the pack and leave it face up on the table. Place the rest of the pack face down on the table alongside the upturned 1. The dealer turns over the top card. The person who first calls out the total of 1 plus the upturned card wins the card. Jacks count as 11, queens count as 12 and kings count as 13. Play continues until all the cards are gone. The winner is the player with the most cards. If the game continues, the winner also becomes the dealer for the next round.

- You can play **Add Snap** using different values (e.g. **Add Snap with 2**; **Add Snap with 3**, etc.) in a similar way.

Subtract Snap with 1/2/3 . . .

To play **Subtract Snap with 1**, the dealer places a pack of cards face down on the table and turns over the top card. The person who first calls out the answer to the number on the upturned card minus 1 wins the card. Jacks count as 11, queens count as 12 and kings count as 13.

- You can play **Subtract Snap** using different values in a similar way: just remove all cards from the pack that are below the chosen value. For example, for **Subtract Snap with 3**, remove all aces and twos.

Add Snap: mixed bag

This is a good game to play to revise a number of Add facts. Use a pack of playing cards with the picture cards removed. The dealer turns over the top two cards in the pack in full view of the other players. The person who first calls out the sum/total of the two cards wins those cards. For example, if the upturned cards are '8' and '6', the answer is 14.

- You can play **Add Zero Snap** in a similar way, but include picture cards, which all count as zero.

Subtract Snap: mixed bag

This is a good game to play to revise a number of Subtract facts. Play as per **Add Snap: mixed bag**, but it is the person who first calls out the difference between the two cards who wins those cards. For example, if the upturned cards are '8' and '6', the answer is 2.

Doubles Snap

Use a pack of playing cards with the picture cards removed. The dealer turns over the top card in the pack in full view of the other players. The person who first calls out the double of that number wins the card. For example, if the upturned cards is '6', the answer is 12.

Near Doubles Snap

Play as per **Doubles Snap**, but it is the person who first calls out the near double of the number who wins that card.

NB: you must decide in advance if the aim is to find the double of the number plus one or minus one. For example, if the upturned card is '6', the answer is either 13 (12 + 1) or 11 (12 – 1).

Halves Snap

Use a pack of playing cards with only even numbers remaining. Play as per **Doubles Snap**, but it is the person who first calls out the half value of the upturned card(s) who wins that card. In the first round, the dealer turns over one card; in the second round, the dealer turns over two cards to represent a two-digit number.

Tens Snap

Play as per **Doubles Snap**, but the number on the upturned card indicates how many groups of ten must be calculated to win the card. For example, if the upturned card is '10', the answer is 100.

Number Facts 2

A New Approach to Tables

Number Facts **is a series of activity books designed to foster fluency in number facts (or 'tables') for primary school children. This attractive and engaging series features an innovative approach to basic number facts, teaching children to understand, not just do, maths.**

In contrast to traditional drill-and-practice workbooks, which just test whether the answer is known, ***Number Facts*** teaches children to **visualise numbers pictorially** and to use these images and **thinking strategies** to become more adept at manipulating numbers, thus also enhancing their **mental calculation** and **problem-solving skills**.

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- **Weekly** units with addition and subtraction activities for Monday to Thursday.
- Each unit has an underlying **thinking strategy**, which is provided in the footer of the first page in each unit.
- **Think boxes** reinforce the relevant thinking strategies.
- Most days include a **Challenge section** to extend the children.
- The **Self-assessment** feature allows children to assess their own learning at the end of every week.
- Separate **Revision** and **Assessment** sections are included for completion at regular intervals to consolidate learning.
- Children can record their assessment scores in their **Personal Progress Chart**.
- A selection of **Family Card Games** is included for parents and children to play at home to reinforce the number facts taught in each unit.

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