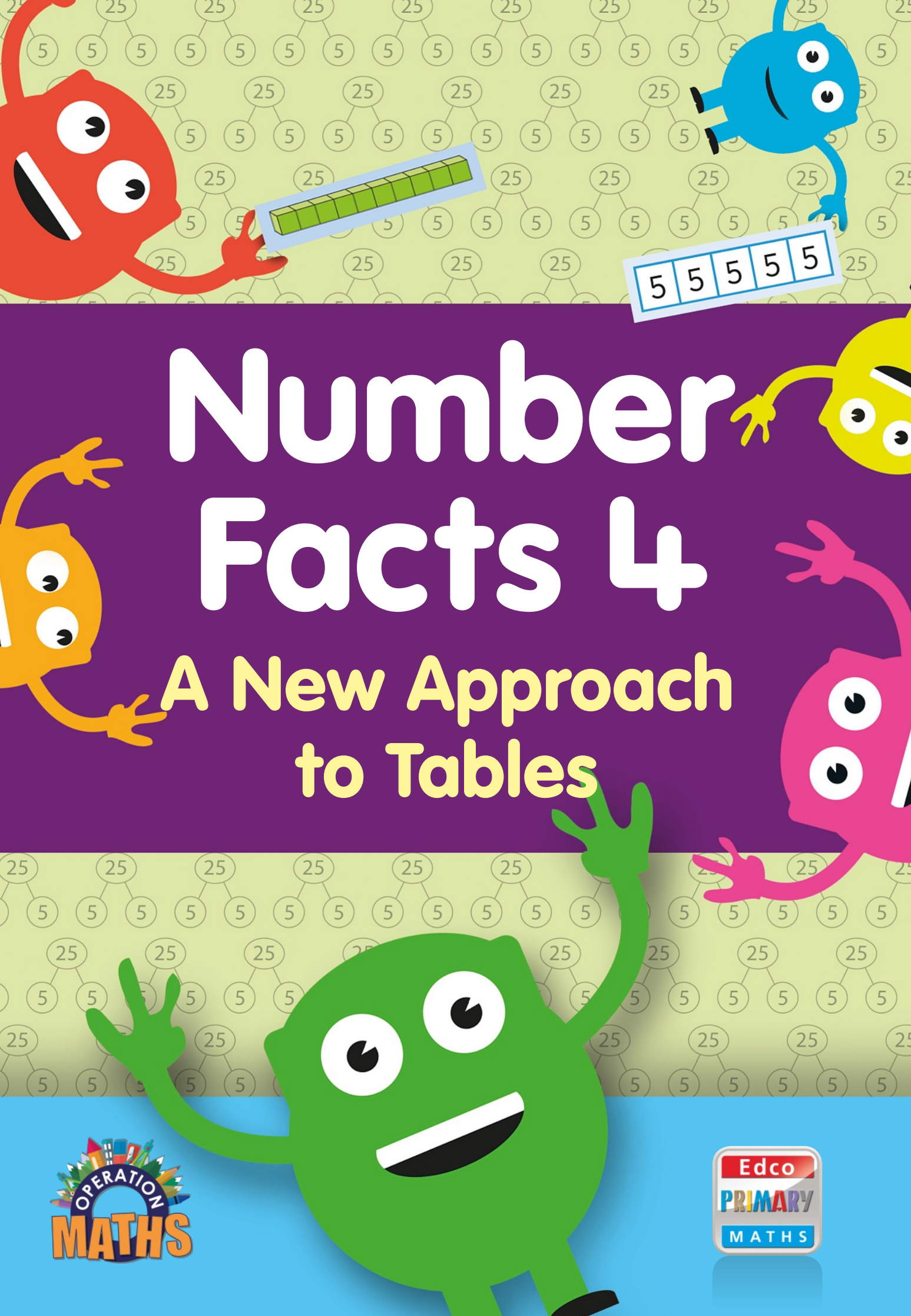

Number Facts 4

A New Approach to Tables

OPERATION MATHS

Edco PRIMARY 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.

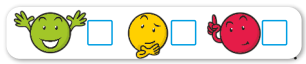
Traditionally, learning tables was by rote, but current research suggests that this is ineffective for the majority of children. In contrast, ***Number Facts*** teaches children to visualise numbers and to use images and thinking strategies *to use what they know to solve what they do not know*.

Thinking strategies

A thinking strategy is a way to think about a process to arrive efficiently at an answer. In ***Number Facts 4*** the focus will largely be on thinking strategies for multiplication and division. 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) Multiplication as groups or rows of a number The children are enabled to recognise that '6 × 2' means 6 groups/rows of 2, or 2 + 2 + 2 + 2 + 2 + 2.	**(b) Turnaround facts** The answer to 6 × 2 is the same as the answer to 2 × 6, and it is more efficient to think of 2 × 6, i.e. 2 groups of 6 or 6 + 6.
(c) Division as the inverse of multiplication Knowing the answer to 2 × 6 and 6 × 2 enables the children to solve 12 ÷ 6 and 12 ÷ 2.	**(d) Multiplying and dividing with 10 and 100** The children are enabled to multiply and divide with 10 and 100 by moving one/two places.
(e) Multiplying and dividing with 2 ● To **multiply** with 2, double the number. ● To **divide** by 2, halve the number.	**(f) Multiplying with 5** Multiply the number by 10 and then halve the result, e.g. 9 × 5 → 9 × 10 = 90 → $\frac{1}{2}$ of 90 = 45.
(g) Multiplying and dividing with 4 ● To **multiply** with 4, double the number and then double the result, e.g. 3 × 4 → 3 × 2 = 6 → 6 × 2 = 12. ● To **divide** by 4, halve the number and then halve the result, e.g. 12 ÷ 4 → $\frac{1}{2}$ of 12 = 6 → $\frac{1}{2}$ of 6 = 3.	**(h) Multiplying and dividing with 8** ● To **multiply** with 8, double the number, double the result, and then double again, e.g. 3 × 8 → 3 × 2 = 6 → 6 × 2 = 12 → 12 × 2 = 24. ● To **divide** by 8, halve the number, halve the result, and then halve again, e.g. 24 ÷ 8 → $\frac{1}{2}$ of 24 = 12 → $\frac{1}{2}$ of 12 = 6 → $\frac{1}{2}$ of 6 = 3.
(i) Multiplying with 1 and 0 When multiplying a number by 1, the answer is always the same as the number. When multiplying any number by zero, the answer is always zero.	**(j) Multiplying with 3** The children are enabled to treble the number, or to add one set to 2 times the number, e.g. 3 × 8 = (2 × 8) + (1 × 8) = 24.
(k) Multiplying with 6 ● Double 3 times the number, e.g. 6 × 8 = (3 × 8) + (3 × 8) = 48. ● Add one set to 5 times the number, e.g. 6 × 8 = (5 × 8) + (1 × 8) = 48.	**(l) Multiplying with 9** ● Treble 3 times the number, e.g. 9 × 8 = (3 × 8) + (3 × 8) + (3 × 8) = 72. ● Subtract one set from 10 times the number, e.g. 9 × 8 → (10 × 8) = 80 → 80 – 8 = 72.

Features of the series

- Each weekly unit includes activities for Monday to Thursday.
- **Challenge** Each day includes a Challenge section to extend the more able children.
- **Self-assessment** The 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** The children can record their assessment scores in this chart at the back of the book.
- **Family Card Games** Parents and children can play these games at home to reinforce the number facts taught in each unit. The page footers indicate which game should be played for each unit.
- **100 Dots** The children are instructed to use the 100 Dots grid on the inside back cover to help.

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. 10 × 17, 5 × 16.

Contents

Unit	Lesson	Pages
1	Add and subtract 1, 10, 100 and 1,000	2–3
2	Add and subtract 2, 20, 200 and 2,000	4–5
3	Add and subtract 3, 30, 300 and 3,000	6–7
4	Bonds of 100 and 1,000	8–9
5	Doubles	10–11
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7	In-between doubles	14–15
8	Multiply with 10 and 100	16–17
9	Divide by 10 and 100	18–19
10	Multiply with 2	20–21
11	Divide by 2	22–23
12	Multiply with 5	24–25
13	Divide by 5	26–27
14	Multiply with 4	28–29
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18	Multiples of 50	36–37
19	Multiples of 25 and 20	38–39
20	Compensation: make 10, 100 and 1,000	40–41
21	Multiply with 3	42–43
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25	Divide by 6	50–51
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28	Multiply with 7	56–57
29	Divide by 7	58–59
	Revision	60–65
	Assessments	66–69
	Personal Progress Chart	69
	Family Card Games	70

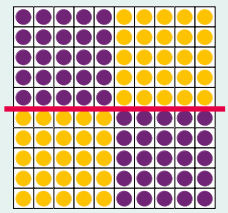
4 Bonds of 100 and 1,000

MONDAY

1 Complete the number sentences.
Use your 100 Dots grid to help.

(a) 50 + ☐ = 100
(b) ☐ + 70 = 100
(c) 90 + ☐ = 100
(d) ☐ + 20 = 100
(e) 60 + ☐ = 100
(f) ☐ + 100 = 100
(g) 80 + ☐ = 100
(h) ☐ + 40 = 100
(i) 10 + ☐ = 100
(j) ☐ + 0 = 100

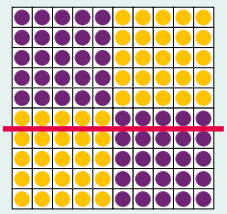
Think:
5 + ? = 10,
so 50 + ? = 100.



2

(a) 100 − 60 = ☐
(b) 100 − 30 = ☐
(c) 100 − 70 = ☐
(d) 100 − 50 = ☐
(e) 100 − 10 = ☐
(f) 100 − 20 = ☐
(g) 100 − 40 = ☐
(h) 100 − 100 = ☐
(i) 100 − 90 = ☐
(j) 100 − 80 = ☐

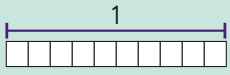
Think:
10 − 6 = ?,
so 100 − 60 = ?



3 Challenge

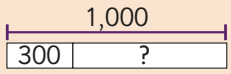
(a) 0.8 + ☐ = 1
(b) ☐ + 0.7 = 1
(c) 1 − 0.1 = ☐
(d) 1 − 0.4 = ☐

Think:
8 + 2 = 10, so
8 tenths + ? tenths = 1.



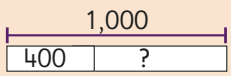
TUESDAY

1 **Think:** 30 + 70 = 100,
so 300 + ? = 1,000.



(a) 300 + ☐ = 1,000
(b) ☐ + 800 = 1,000
(c) 700 + ☐ = 1,000
(d) ☐ + 200 = 1,000
(e) 100 + ☐ = 1,000
(f) ☐ + 400 = 1,000
(g) 900 + ☐ = 1,000
(h) ☐ + 1,000 = 1,000
(i) 600 + ☐ = 1,000
(j) ☐ + 500 = 1,000

2 **Think:** 100 − 40 = 60,
so 1,000 − 400 = ?

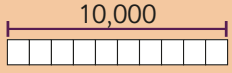


(a) 1,000 − 400 = ☐
(b) 1,000 − ☐ = 100
(c) 1,000 − 300 = ☐
(d) 1,000 − ☐ = 600
(e) 1,000 − 800 = ☐
(f) 1,000 − ☐ = 700
(g) 1,000 − 500 = ☐
(h) 1,000 − ☐ = 1,000
(i) 1,000 − 900 = ☐
(j) 1,000 − ☐ = 200

3 Challenge

(a) 5,000 + ☐ = 10,000
(b) ☐ + 1,000 = 10,000
(c) 10,000 − 4,000 = ☐
(d) 10,000 − 8,000 = ☐

Think:

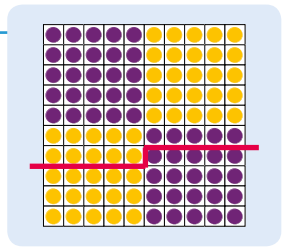


Thinking Strategy The various ways to partition 100 and 1,000 (benchmark numbers).

WEDNESDAY

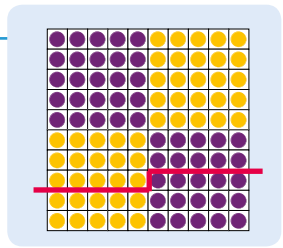
1 Complete the number sentences.
Use your 100 Dots grid to help.

(a) 65 + ☐ = 100
(b) ☐ + 15 = 100
(c) 5 + ☐ = 100
(d) ☐ + 35 = 100
(e) 55 + ☐ = 100
(f) ☐ + 75 = 100
(g) 85 + ☐ = 100
(h) ☐ + 45 = 100
(i) 95 + ☐ = 100
(j) ☐ + 25 = 100



2

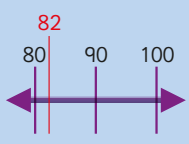
(a) 100 – 75 = ☐
(b) 100 – ☐ = 35
(c) 100 – 25 = ☐
(d) 100 – ☐ = 85
(e) 100 – 55 = ☐
(f) 100 – ☐ = 95
(g) 100 – 15 = ☐
(h) 100 – ☐ = 45
(i) 100 – 65 = ☐
(j) 100 – ☐ = 5



3 Challenge

(a) 82 + ☐ = 100
(b) ☐ + 26 = 100
(c) 100 – 61 = ☐
(d) 100 – ☐ = 57

Think:

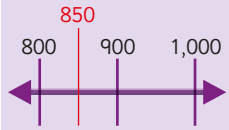


THURSDAY

1

(a) 850 + ☐ = 1,000
(b) ☐ + 450 = 1,000
(c) 50 + ☐ = 1,000
(d) ☐ + 750 = 1,000
(e) 550 + ☐ = 1,000
(f) ☐ + 150 = 1,000
(g) 250 + ☐ = 1,000
(h) ☐ + 650 = 1,000
(i) 950 + ☐ = 1,000
(j) ☐ + 350 = 1,000

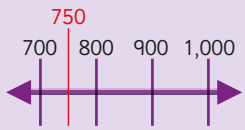
Think: visualise a number line.



2 What's the difference between 1,000 and:

(a) 750? ☐
(b) 250? ☐
(c) 850? ☐
(d) 350? ☐
(e) 450? ☐
(f) 150? ☐
(g) 950? ☐
(h) 550? ☐
(i) 650? ☐
(j) 50? ☐

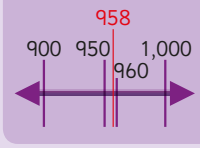
Think:



3 Challenge

(a) 958 + ☐ = 1,000
(b) ☐ + 327 = 1,000
(c) 1,000 – 619 = ☐
(d) 1,000 – 484 = ☐

Think: are there other ways to solve these?



Dear Family Play 'Make 100' (see page 70).

8 Multiply with 10 and 100

MONDAY

1

(a) 3 tens = ☐

(b) 9 tens = ☐

(c) 0 tens = ☐

(d) 4 tens = ☐

(e) 8 tens = ☐

(f) 1 ten = ☐

(g) 6 tens = ☐

(h) 10 tens = ☐

(i) 5 tens = ☐

(j) 2 tens = ☐

(k) 7 tens = ☐

Think: count in tens.

2

(a) 4 hundreds = ☐

(b) 3 hundreds = ☐

(c) 10 hundreds = ☐

(d) 5 hundreds = ☐

(e) 9 hundreds = ☐

(f) 2 hundreds = ☐

(g) 7 hundreds = ☐

(h) 0 hundreds = ☐

(i) 8 hundreds = ☐

(j) 1 hundred = ☐

(k) 6 hundreds = ☐

Think: count in hundreds.

100 100 100 100 100 100 100 100 100 100

3 Challenge

(a) 15 tens = ☐

(b) 20 tens = ☐

(c) 10 hundreds = ☐

(d) 20 hundreds = ☐

TUESDAY

1 Fill in the missing numbers.

	U		T	U
(a)	7	tens =	7	0
(b)	6	tens =		
(c)	3	tens =		
(d)	8	tens =		
(e)	9	tens =		
(f)	5	tens =		
(g)	2	tens =		
(h)	4	tens =		
(i)	1	ten =		

2 Fill in the missing numbers.

	U		H	T	U
(a)	5	hundreds =	5	0	0
(b)	9	hundreds =			
(c)	3	hundreds =			
(d)	1	hundred =			
(e)	6	hundreds =			
(f)	7	hundreds =			
(g)	2	hundreds =			
(h)	4	hundreds =			
(i)	8	hundreds =			

3 Challenge

(a) 18 tens = ☐

(b) 24 tens = ☐

(c) 35 tens = ☐

(d) 13 hundreds = ☐

(e) 25 hundreds = ☐

(f) 69 hundreds = ☐

(g) 80 hundreds = ☐

Thinking Strategy Multiply a number by 10/100 by moving the digits one/two places to the left (the place of greater value).

WEDNESDAY

1 (a) $10 \times 7 = \square$

(b) $6 \times 10 = \square$

(c) $3 \times 100 = \square$

(d) $100 \times 4 = \square$

(e) $5 \times 10 = \square$

(f) $100 \times 9 = \square$

(g) $0 \times 100 = \square$

(h) $10 \times 8 = \square$

(i) $1 \times 100 = \square$

(j) $10 \times 10 = \square$

(k) $2 \times 100 = \square$

Think: move the digits and add zeroes as necessary.

T	U
	7
7	0

2 (a) $\square = 100 \times 5$

(b) $\square = 1 \times 10$

(c) $\square = 10 \times 6$

(d) $\square = 0 \times 100$

(e) $\square = 100 \times 9$

(f) $\square = 4 \times 10$

(g) $\square = 10 \times 7$

(h) $\square = 2 \times 100$

(i) $\square = 10 \times 8$

(j) $\square = 100 \times 3$

(k) $\square = 10 \times 10$

Think: what number is the product of 100 times 5?

3 Challenge

(a) $17 \times 100 = \square$

(b) $28 \times 10 = \square$

(c) $\square = 10 \times 86$

(d) $\square = 100 \times 53$

THURSDAY

1 (a) $100 \times \square = 600$

(b) $\square \times 10 = 50$

(c) $10 \times \square = 70$

(d) $\square \times 100 = 300$

(e) $100 \times \square = 100$

(f) $\square \times 10 = 80$

(g) $10 \times \square = 100$

(h) $\square \times 100 = 0$

(i) $100 \times \square = 400$

(j) $\square \times 10 = 20$

(k) $10 \times \square = 90$

Think: 100 times what number equals 600?

H	T	U
		?
6	0	0

2 (a) $60 = 10 \times \square$

(b) $900 = \square \times 100$

(c) $0 = 100 \times \square$

(d) $50 = \square \times 10$

(e) $400 = 100 \times \square$

(f) $300 = \square \times 100$

(g) $10 = 10 \times \square$

(h) $20 = \square \times 10$

(i) $800 = 100 \times \square$

(j) $1{,}000 = \square \times 100$

(k) $70 = 10 \times \square$

Think: 60 is the product of 10 and what number?

3 Challenge

(a) $100 \times \square = 1{,}300$

(b) $\square \times 10 = 420$

(c) $7{,}600 = 10 \times \square$

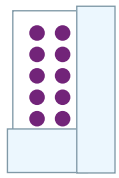
(d) $3{,}500 = \square \times 100$

Dear Family Play 'Times Snap' with 10 and/or 100 (see page 70).

13 Divide by 5

MONDAY

1 Use your 100 Dots grid. Share each amount to make 5 equal rows.



(a) 10 = 5 rows of 2
(b) 40 = 5 rows of ☐
(c) 25 = 5 rows of ☐
(d) 50 = 5 rows of ☐
(e) 45 = 5 rows of ☐
(f) 15 = 5 rows of ☐
(g) 5 = 5 rows of ☐
(h) 20 = 5 rows of ☐
(i) 30 = 5 rows of ☐
(j) 35 = 5 rows of ☐

2 How many equal:

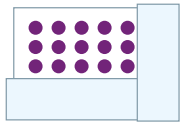
(a) €20? 4
(b) €15? ☐
(c) €35? ☐
(d) €50? ☐
(e) €10? ☐
(f) €5? ☐
(g) €45? ☐
(h) €40? ☐
(i) €25? ☐
(j) €30? ☐

3 Challenge How many €5 notes equal:

(a) €55? ☐ (b) €75? ☐
(c) €100? ☐ (d) €125? ☐

TUESDAY

1 Use your 100 Dots grid.
How many rows of 5 in:



(a) 15? ☐ (b) 40? ☐
(c) 5? ☐ (d) 10? ☐
(e) 45? ☐ (f) 30? ☐
(g) 25? ☐ (h) 50? ☐
(i) 35? ☐ (j) 20? ☐

2 Use multiplication to solve division.

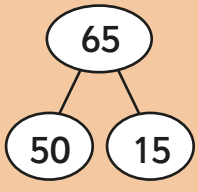
Think: multiplication is the inverse of division.

(a) 5 × 6 = 30, so 30 ÷ 5 = ☐
(b) 5 × ☐ = 40, so 40 ÷ 5 = ☐
(c) 5 × ☐ = 15, so 15 ÷ 5 = ☐
(d) 5 × ☐ = 10, so 10 ÷ 5 = ☐
(e) 5 × ☐ = 45, so 45 ÷ 5 = ☐
(f) 5 × ☐ = 20, so 20 ÷ 5 = ☐
(g) 5 × ☐ = 25, so 25 ÷ 5 = ☐
(h) 5 × ☐ = 35, so 35 ÷ 5 = ☐
(i) 5 × ☐ = 50, so 50 ÷ 5 = ☐
(j) 5 × ☐ = 5, so 5 ÷ 5 = ☐

3 Challenge How many fives in:

(a) 65? ☐
(b) 80? ☐
(c) 110? ☐
(d) 135? ☐

Think: break into friendly numbers.

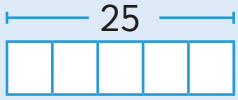


Thinking Strategy Division as the inverse of multiplication: knowing that 6 × 5 = 30 can solve 30 ÷ 5.

WEDNESDAY

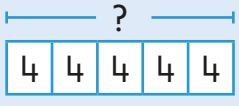
1 (a) 25 ÷ 5 = ☐
(b) 20 ÷ 5 = ☐
(c) 35 ÷ 5 = ☐
(d) 10 ÷ 5 = ☐
(e) 30 ÷ 5 = ☐
(f) 15 ÷ 5 = ☐
(g) 40 ÷ 5 = ☐
(h) 45 ÷ 5 = ☐
(i) 50 ÷ 5 = ☐
(j) 5 ÷ 5 = ☐

Think:
5 × what number equals 25?



2 (a) 50 ÷ ☐ = 5
(b) ☐ ÷ 5 = 4
(c) 15 ÷ ☐ = 5
(d) ☐ ÷ 5 = 8
(e) 30 ÷ ☐ = 5
(f) ☐ ÷ 5 = 7
(g) 25 ÷ ☐ = 5
(h) ☐ ÷ 5 = 9
(i) 10 ÷ ☐ = 5
(j) ☐ ÷ 5 = 1

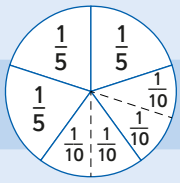
Think:
what number ÷ 5 equals 4?



Or think:
5 groups of 4 equals what number?

3 Challenge

Think:
- $\frac{1}{10}$ = half of $\frac{1}{5}$
- $\frac{1}{5}$ is double $\frac{1}{10}$



(a) $\frac{1}{10}$ of 70 = ☐, so $\frac{1}{5}$ of 70 = ☐
(b) $\frac{1}{10}$ of 90 = ☐, so $\frac{1}{5}$ of 90 = ☐
(c) $\frac{1}{10}$ of 120 = ☐, so $\frac{1}{5}$ of 120 = ☐
(d) $\frac{1}{10}$ of 210 = ☐, so $\frac{1}{5}$ of 210 = ☐

THURSDAY

1 Division can be shown in different ways. Solve.

(a) 5 | 10 (b) 5 | 35 (c) 5 | 50

(d) 5 | 45 (e) 5 | 25 (f) 5 | 20

(g) 5 | ☐ (h) 5 | ☐ (i) 5 | ☐
8 3 6

2 (a) 5 | 45 (b) 5 | 30 (c) 5 | 40

(d) 5 | 15 (e) 5 | 50 (f) 5 | 20

(g) 5 | 7 (h) 5 | 5 (i) 5 | 2

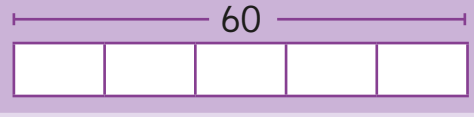
3 These have remainders.

(a) 5 | 17 (b) 5 | 29 (c) 5 | 32

(d) 5 | 36 (e) 5 | 41 (f) 5 | 48

4 Challenge

Think: visualise a bar model.



(a) $\frac{1}{5}$ of 60 = ☐, so $\frac{2}{5}$ of 60 = ☐
(b) $\frac{1}{5}$ of 75 = ☐, so $\frac{2}{5}$ of 75 = ☐
(c) $\frac{1}{5}$ of 100 = ☐, so $\frac{3}{5}$ of 100 = ☐
(d) $\frac{1}{5}$ of 150 = ☐, so $\frac{4}{5}$ of 150 = ☐

Dear Family Play 'Times Snap' with 5 (see page 70).

You are now ready to do Revision B (page 60).

18 Multiples of 50

MONDAY

1

(a) 8 fifties = €☐

(b) 2 fifties = €☐

(c) 7 fifties = €☐

(d) 10 fifties = €☐

(e) 6 fifties = €☐

(f) 4 fifties = €☐

(g) 3 fifties = €☐

(h) 5 fifties = €☐

(i) 9 fifties = €☐

Think:
count in jumps of 50.

2 How many €50 notes equal:

(a) €200? ☐ (b) €150? ☐

(c) €350? ☐ (d) €500? ☐

(e) €100? ☐ (f) €50? ☐

(g) €450? ☐ (h) €400? ☐

(i) €250? ☐ (j) €300? ☐

3 Count on in jumps of 50.

0	50			200	
			450		

4 How many jumps of 50 from 0 to:

(a) 450? ☐ (b) 400? ☐

(c) 250? ☐ (d) 300? ☐

(e) 200? ☐ (f) 150? ☐

(g) 350? ☐ (h) 100? ☐

5 Challenge

(a) 20 fifties = €☐

(b) 15 fifties = €☐

(c) 25 fifties = €☐

Think:
of money to help.

TUESDAY

1

Think:
50 is 10 times bigger than 5, so the answer will be 10 times bigger.

(a) 8 × 5 = ☐, so 8 × 50 = ☐

(b) 4 × 5 = ☐, so 4 × 50 = ☐

(c) 10 × 5 = ☐, so 10 × 50 = ☐

(d) 7 × 5 = ☐, so 7 × 50 = ☐

(e) 5 × 5 = ☐, so 5 × 50 = ☐

(f) 2 × 5 = ☐, so 2 × 50 = ☐

(g) 9 × 5 = ☐, so 9 × 50 = ☐

(h) 6 × 5 = ☐, so 6 × 50 = ☐

(i) 3 × 5 = ☐, so 3 × 50 = ☐

2

Think:
5 × is half of 10 ×, so 50 × is half of 100 ×

(a) 4 × 100 = ☐, so 4 × 50 = ☐

(b) 6 × 100 = ☐, so 6 × 50 = ☐

(c) 3 × 100 = ☐, so 3 × 50 = ☐

(d) 9 × 100 = ☐, so 9 × 50 = ☐

(e) 2 × 100 = ☐, so 2 × 50 = ☐

(f) 8 × 100 = ☐, so 8 × 50 = ☐

(g) 7 × 100 = ☐, so 7 × 50 = ☐

(h) 10 × 100 = ☐, so 10 × 50 = ☐

(i) 5 × 100 = ☐, so 5 × 50 = ☐

3 Challenge

(a) 12 × 100 = ☐, so 12 × 50 = ☐

(b) 11 × 100 = ☐, so 11 × 50 = ☐

(c) 13 × 100 = ☐, so 13 × 50 = ☐

(d) 18 × 100 = ☐, so 18 × 50 = ☐

Thinking Strategy To multiply any number by 50, first multiply by 100 and then halve the result.

WEDNESDAY

1 Make turnaround facts.

(a) 3 × 50 = 50 × 3 = ☐
(b) 9 × 50 = 50 × ☐ = ☐
(c) 2 × 50 = 50 × ☐ = ☐
(d) 7 × 50 = 50 × ☐ = ☐
(e) 10 × 50 = 50 × ☐ = ☐
(f) 1 × 50 = 50 × ☐ = ☐
(g) 4 × 50 = 50 × ☐ = ☐
(h) 5 × 50 = 50 × ☐ = ☐
(i) 8 × 50 = 50 × ☐ = ☐
(j) 6 × 50 = 50 × ☐ = ☐

2 **Think:**
use doubling and halving.

(a) 4 × 50 = 2 × 100 = ☐
(b) 8 × 50 = ☐ × 100 = ☐
(c) 6 × 50 = ☐ × 100 = ☐
(d) 2 × 50 = ☐ × 100 = ☐
(e) 10 × 50 = ☐ × 100 = ☐

3 **Challenge**

(a) 16 × 50 = ☐ × 100 = ☐
(b) 14 × 50 = ☐ × 100 = ☐
(c) 22 × 50 = ☐ × 100 = ☐
(d) 26 × 50 = ☐ × 100 = ☐

THURSDAY

1 Use multiplication to solve division.

(a) 50 × 5 = 250, so 250 ÷ 50 = ☐
(b) 50 × ☐ = 400, so 400 ÷ 50 = ☐
(c) 50 × ☐ = 150, so 150 ÷ 50 = ☐
(d) 50 × ☐ = 100, so 100 ÷ 50 = ☐
(e) 50 × ☐ = 450, so 450 ÷ 50 = ☐
(f) 50 × ☐ = 200, so 200 ÷ 50 = ☐
(g) 50 × ☐ = 300, so 300 ÷ 50 = ☐
(h) 50 × ☐ = 350, so 350 ÷ 50 = ☐
(i) 50 × ☐ = 500, so 500 ÷ 50 = ☐
(j) 50 × ☐ = 50, so 50 ÷ 50 = ☐

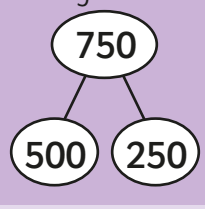
2 (a) 250 ÷ 50 = ☐
(b) 200 ÷ 50 = ☐
(c) 350 ÷ 50 = ☐
(d) 100 ÷ 50 = ☐
(e) 300 ÷ 50 = ☐
(f) 150 ÷ 50 = ☐
(g) 400 ÷ 50 = ☐
(h) 450 ÷ 50 = ☐
(i) 500 ÷ 50 = ☐
(j) 50 ÷ 50 = ☐

Think:
how many groups of 50 in 250?

3 **Challenge**

(a) 750 ÷ 50 = ☐
(b) 850 ÷ 50 = ☐
(c) 1,000 ÷ 50 = ☐
(d) 1,250 ÷ 50 = ☐

Think:
break into friendly numbers.

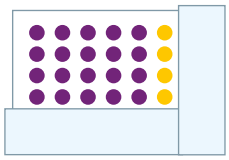


Dear Family Play 'Times Snap' with 50 (see page 70).

22 Multiply with 6

MONDAY

1 Use your 100 Dots grid.



(a) 4 rows of 6 = ☐

(b) 2 rows of 6 = ☐

(c) 10 rows of 6 = ☐

(d) 8 rows of 6 = ☐

(e) 5 rows of 6 = ☐

(f) 3 rows of 6 = ☐

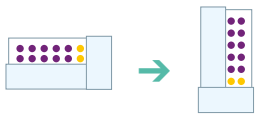
(g) 9 rows of 6 = ☐

(h) 7 rows of 6 = ☐

(i) 6 rows of 6 = ☐

2 Use your 100 Dots grid to make turnaround facts.

(a) 2 × 6 = 6 × 2 = ☐



(b) 5 × 6 = 6 × ☐ = ☐

(c) 8 × 6 = 6 × ☐ = ☐

(d) 10 × 6 = 6 × ☐ = ☐

(e) 6 × 6 = 6 × ☐ = ☐

(f) 3 × 6 = 6 × ☐ = ☐

(g) 9 × 6 = 6 × ☐ = ☐

(h) 7 × 6 = 6 × ☐ = ☐

(i) 4 × 6 = 6 × ☐ = ☐

3 Challenge

(a) 12 × 6 = 6 × ☐ = ☐

(b) 15 × 6 = 6 × ☐ = ☐

(c) 20 × 6 = 6 × ☐ = ☐

(d) 25 × 6 = 6 × ☐ = ☐

TUESDAY

1 Multiply by 5. Add one more set.

		5 ×	6 ×
(a)	8	40	48
(b)	4		
(c)	6		
(d)	2		
(e)	7		
(f)	5		
(g)	1		
(h)	10		
(i)	3		
(j)	0		
(k)	9		

Think: 6 × is one set more than 5 ×.

2 Treble the number and then double your answer.

		3 ×	6 ×
(a)	5	15	30
(b)	2		
(c)	3		
(d)	8		
(e)	1		
(f)	0		
(g)	9		
(h)	6		
(i)	10		
(j)	4		
(k)	7		

Think: 6 × is double 3 ×.

3 Challenge

		3 ×	6 ×
(a)	13		
(b)	14		
(c)	27		
(d)	40		

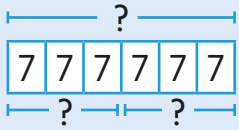
Thinking Strategy • Find double 3 times the number, e.g. 6 × 8 = (3 × 8) + (3 × 8).
• Add one set more to 5 times the number, e.g. 6 × 8 = (5 × 8) + (1 × 8).

WEDNESDAY

1 Use your thinking strategies.

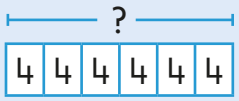
(a) 6 × 7 = ☐
(b) 5 × 6 = ☐
(c) 6 × 6 = ☐
(d) 2 × 6 = ☐
(e) 6 × 10 = ☐
(f) 4 × 6 = ☐
(g) 6 × 3 = ☐
(h) 1 × 6 = ☐
(i) 6 × 9 = ☐
(j) 6 × 8 = ☐

Think: treble 7 and then double your answer.



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

Think: what number equals 6 groups of 4?



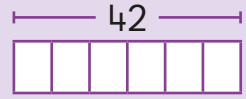
3 **Challenge** Use doubling and halving.

(a) 3 × 18 = 6 × ☐ = ☐
(b) 3 × 26 = 6 × ☐ = ☐
(c) 3 × ☐ = 6 × 15 = ☐
(d) 3 × ☐ = 6 × 35 = ☐

THURSDAY

1 (a) 6 × ☐ = 42
(b) ☐ × 6 = 18
(c) 6 × ☐ = 24
(d) ☐ × 6 = 54
(e) 6 × ☐ = 12
(f) ☐ × 6 = 0
(g) 6 × ☐ = 6
(h) ☐ × 6 = 48
(i) 6 × ☐ = 60
(j) ☐ × 6 = 30
(k) 6 × ☐ = 36

Think: 6 times what number equals 42?



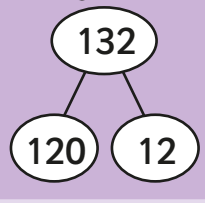
2 (a) 18 = ☐ × 6
(b) 6 = 6 × ☐
(c) 60 = ☐ × 6
(d) 36 = 6 × ☐
(e) 0 = ☐ × 6
(f) 54 = 6 × ☐
(g) 42 = ☐ × 6
(h) 24 = 6 × ☐
(i) 30 = ☐ × 6
(j) 48 = 6 × ☐
(k) 12 = ☐ × 6

Think: 18 equals how many groups of 6?

3 **Challenge**

(a) 6 × ☐ = 132
(b) 6 × ☐ = 108
(c) 96 = 6 × ☐
(d) 204 = ☐ × 6

Think: break into friendly numbers.



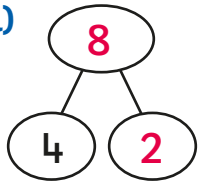
Dear Family Play 'Times Snap' with 6 (see page 70).

Revision C (Units 14–20)

1 Multiplication and division facts with 4

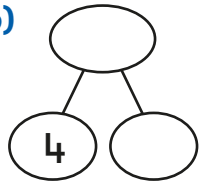
Complete the number bonds to show multiplication and division facts with 4.
Write the matching number sentences. The first one is done for you.
You can write the number sentences for parts (f) to (j) in your copy.

(a)



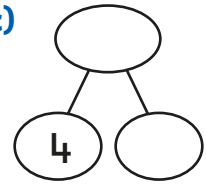
4 × 2 = 8
2 × 4 = 8
8 ÷ 4 = 2
8 ÷ 2 = 4

(b)



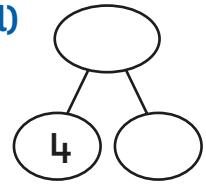
4 × ☐ = ☐
☐ × 4 = ☐
☐ ÷ 4 = ☐
☐ ÷ ☐ = 4

(c)



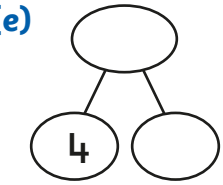
☐ × ☐ = ☐
☐ × ☐ = ☐
☐ ÷ ☐ = ☐
☐ ÷ ☐ = ☐

(d)



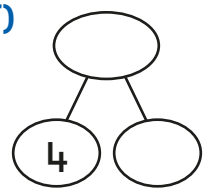
☐ × ☐ = ☐
☐ × ☐ = ☐
☐ ÷ ☐ = ☐
☐ ÷ ☐ = ☐

(e)

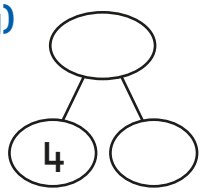


☐ × ☐ = ☐
☐ × ☐ = ☐
☐ ÷ ☐ = ☐
☐ ÷ ☐ = ☐

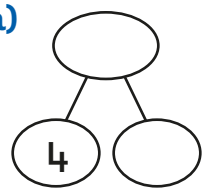
(f)



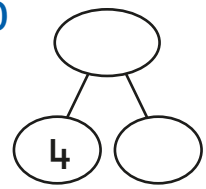
(g)



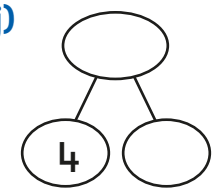
(h)



(i)



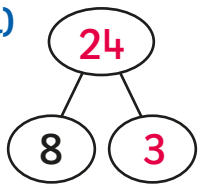
(j)



2 Multiplication and division facts with 8

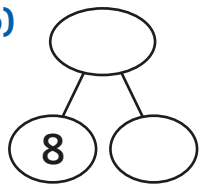
Complete the number bonds to show multiplication and division facts with 8.
Write the matching number sentences. The first one is done for you.
You can write the number sentences for parts (f) to (j) in your copy.

(a)



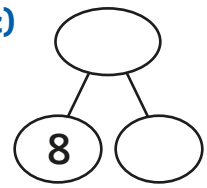
8 × 3 = 24
3 × 8 = 24
24 ÷ 8 = 3
24 ÷ 3 = 8

(b)



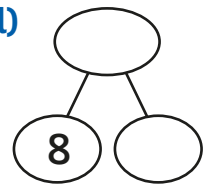
8 × ☐ = ☐
☐ × 8 = ☐
☐ ÷ 8 = ☐
☐ ÷ ☐ = 8

(c)



☐ × ☐ = ☐
☐ × ☐ = ☐
☐ ÷ ☐ = ☐
☐ ÷ ☐ = ☐

(d)



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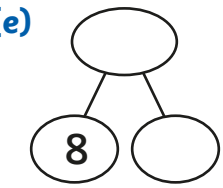

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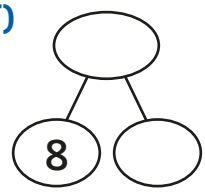

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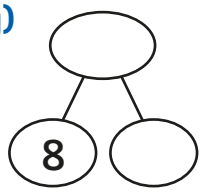

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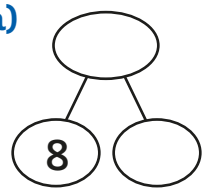

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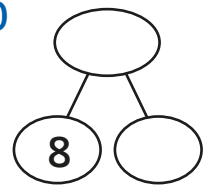
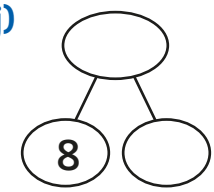


(j)



Assessment C (Units 14–20)

40

1

(a) $3 \times 8 =$ ☐

(b) $8 \times 5 =$ ☐

(c) $3 \times 4 =$ ☐

(d) $9 \times 8 =$ ☐

(e) $4 \times 6 =$ ☐

(f) $4 \times$ ☐ $= 0$

(g) $8 \times$ ☐ $= 8$

(h) $7 \times$ ☐ $= 28$

(i) $4 \times$ ☐ $= 16$

(j) $8 \times$ ☐ $= 56$

2

(a) $8 \div 4 =$ ☐

(b) $80 \div 8 =$ ☐

(c) $28 \div 4 =$ ☐

(d) $64 \div 8 =$ ☐

(e) $32 \div 4 =$ ☐

(f) $36 \div$ ☐ $= 4$

(g) $6 \times$ ☐ $= 48$

(h) $40 \div$ ☐ $= 10$

(i) $32 \div$ ☐ $= 8$

(j) $2 \times$ ☐ $= 16$

3

(a) $9 \times 50 =$ ☐

(b) $2 \times 20 =$ ☐

(c) $10 \times 25 =$ ☐

(d) $20 \times 6 =$ ☐

(e) $25 \times$ ☐ $= 200$

(f) $20 \times$ ☐ $= 160$

(g) $50 \times$ ☐ $= 250$

(h) $100 \div 25 =$ ☐

(i) $140 \div 20 =$ ☐

(j) $200 \div 50 =$ ☐

4

(a) $29 + 18 =$ ☐

(b) $38 + 16 =$ ☐

(c) $79 + 34 =$ ☐

(d) $390 + 176 =$ ☐

(e) $998 + 245 =$ ☐

(f) $53 - 19 =$ ☐

(g) $74 - 49 =$ ☐

(h) $102 - 89 =$ ☐

(i) $435 - 290 =$ ☐

(j) $1{,}812 - 997 =$ ☐

Assessment D (Units 21–26)

40

1

(a) $4 \times 3 =$ ☐

(b) $9 \times 8 =$ ☐

(c) $7 \times 6 =$ ☐

(d) $8 \times 6 =$ ☐

(e) $7 \times 9 =$ ☐

(f) $3 \times 6 =$ ☐

(g) $9 \times 6 =$ ☐

(h) $9 \times 3 =$ ☐

(i) $0 \times 3 =$ ☐

(j) $3 \times 3 =$ ☐

2

(a) $3 \times$ ☐ $= 9$

(b) $9 \times$ ☐ $= 0$

(c) $9 \times$ ☐ $= 45$

(d) $6 \times$ ☐ $= 30$

(e) $6 \times$ ☐ $= 36$

(f) $3 \times$ ☐ $= 12$

(g) $9 \times$ ☐ $= 27$

(h) $3 \times$ ☐ $= 6$

(i) $6 \times$ ☐ $= 12$

(j) $3 \times$ ☐ $= 0$

3

(a) $48 \div 6 =$ ☐

(b) $36 \div 6 =$ ☐

(c) $3 \div 3 =$ ☐

(d) $63 \div 9 =$ ☐

(e) $18 \div 3 =$ ☐

(f) $54 \div 6 =$ ☐

(g) $24 \div 6 =$ ☐

(h) $72 \div 9 =$ ☐

(i) $54 \div 9 =$ ☐

(j) $6 \div 3 =$ ☐

4

(a) $6 \times 0 =$ ☐

(b) $7 \times$ ☐ $= 42$

(c) $90 \div 9 =$ ☐

(d) $72 \div$ ☐ $= 8$

(e) $3 \times 5 =$ ☐

(f) $30 \div$ ☐ $= 10$

(g) $60 \div 6 =$ ☐

(h) $6 \times$ ☐ $= 30$

(i) $0 \times 9 =$ ☐

(j) $18 \div$ ☐ $= 2$

Assessment G (All units)

40

1

(a) 9 × ☐ = 9

(b) 10 × 7 = ☐

(c) 8 × ☐ = 64

(d) 25 × 4 = ☐

(e) 100 × ☐ = 300

(f) 0 × 8 = ☐

(g) 3 × ☐ = 15

(h) 10 × 9 = ☐

(i) 50 × ☐ = 350

(j) 3 × 3 = ☐

2

(a) 27 ÷ 9 = ☐

(b) 3 × ☐ = 21

(c) 30 ÷ 5 = ☐

(d) 72 ÷ ☐ = 9

(e) 400 ÷ 100 = ☐

(f) 8 × ☐ = 32

(g) 18 ÷ 6 = ☐

(h) 10 ÷ ☐ = 5

(i) 180 ÷ 20 = ☐

(j) 45 ÷ ☐ = 5

3

(a) 5 × 5 = ☐

(b) 4,561 + 3,000 = ☐

(c) 7 × 4 = ☐

(d) 146 – 59 = ☐

(e) 60 + 80 = ☐

(f) 4 × 9 = ☐

(g) 850 + ☐ = 1,000

(h) 6 × ☐ = 54

(i) 457 – 38 = ☐

(j) 56 + 57 = ☐

4

(a) 125 + ☐ = 250

(b) 40 ÷ 8 = ☐

(c) 963 – 590 = ☐

(d) 7 × 8 = ☐

(e) 198 + 127 = ☐

(f) 42 ÷ 7 = ☐

(g) 100 – 35 = ☐

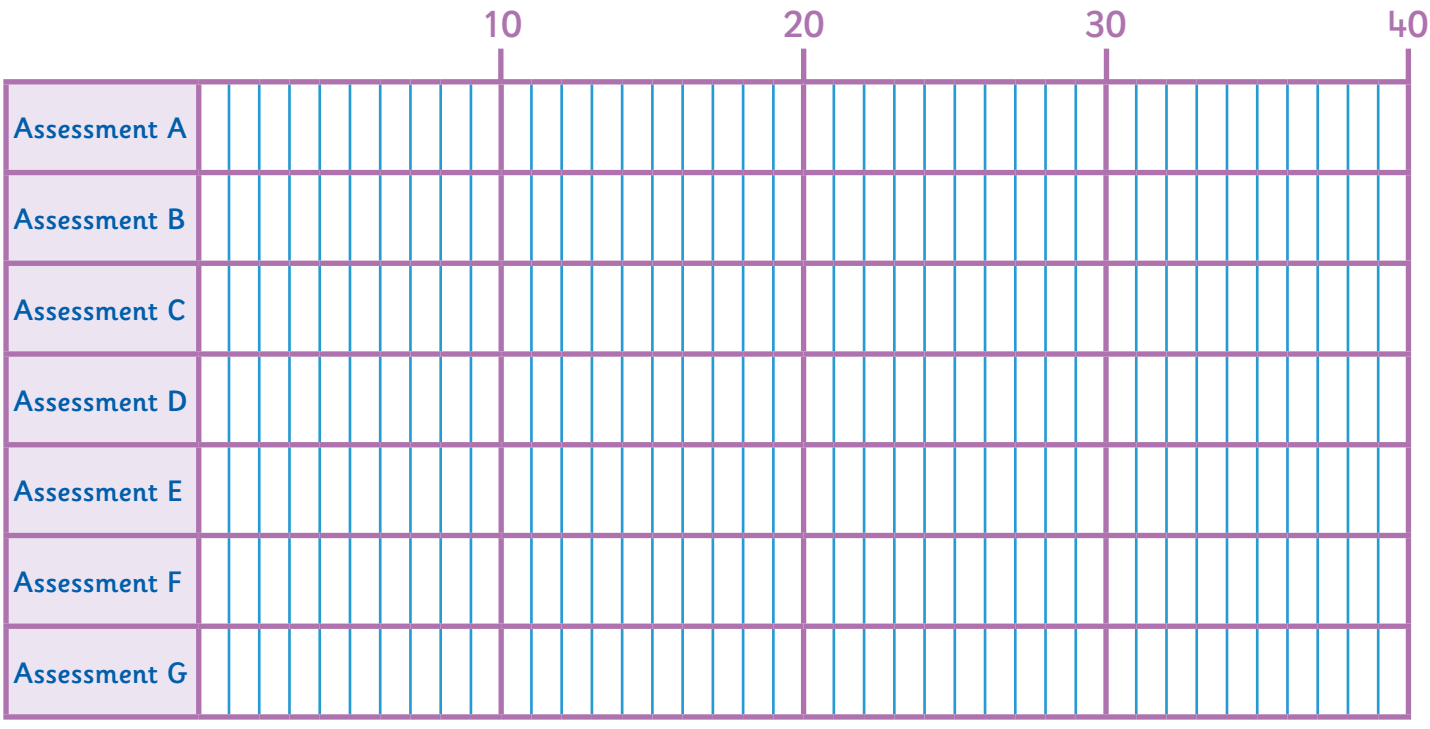
(h) 4 ÷ 4 = ☐

(i) 500 + 700 = ☐

(j) 6 × 6 = ☐

Personal Progress Chart

Colour the correct number of squares to show your score.



Family Card Games

Add Snap

Decide in advance which game you are playing, e.g. the following instructions relate to **Add Snap with 10** and should be modified as appropriate.

Use a pack of playing cards with the '10' cards and the picture cards removed. The dealer turns over the top two cards in the pack in full view of the other players. Those cards represent a two-digit number, e.g. '2' and '6' represent 26. The person who first calls out the total of the number of the upturned cards plus 10 (36, in this case) wins those cards. 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 100/1,000/2,000**) in a similar way.
- **Variation:** turn over the top three or top four cards to play the game using three- or four-digit numbers.

Make 10

Use a pack of cards with the kings and queens removed. 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. Jacks are worth zero. Play continues until all the cards are gone. The winner is the player with the most cards.

Make 100

Use a pack of playing cards with the picture cards removed. The dealer turns over one card in full view of the other players. The number on the card represents the number of tens. The winner is the person who first calls out the amount needed to make 100. For example, if the upturned card is a '7' (representing 7 tens or 70) the answer is 30.

- **Variation:** leave a '5' card upturned to represent the units value, and then place the next card beside it as the tens value. For example, if the next card turned over is '7' (representing 7 tens or 70) the total number represented is 75, so the answer is 25.

Doubles Snap

Use a pack of playing cards with the picture cards removed. The dealer turns over the top two cards in the pack. The cards represent a two-digit number. The person who first calls out the double of that number wins the cards. For example, if the upturned cards are '3' and '2' (representing 32), the answer is 64.

- **Variation:** to make the game easier initially, use only cards up to five.
- You can play **Doubles Snap: Hundreds** in a similar way. The dealer turns over one card only. The upturned card represents that number of hundreds, e.g. '6' represents 6 hundreds or 600. So, in this case, the person who first calls out 1,200 wins that card.

Near Doubles Snap

Play as per **Doubles Snap**, but it is the person who first calls out the near double of that number who wins the cards. 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 cards are '3' and '2' (representing 32), the answer is either 63 or 65.

- You can also play **Near Doubles Snap: Hundreds** in a similar way. The dealer turns over one card only. The upturned card represents that number of hundreds. The person who first calls out the double of that number plus or minus one hundred wins the card.

  For example, '6' represents 6 hundreds or 600. So, in this case, the winner is the person who first calls out 1,300 or 1,100.

Times Snap

Decide in advance which game you are playing, e.g. the following instructions relate to **Times Snap with 10** and should be modified as appropriate.

Use a pack of playing cards with the picture cards removed. The dealer turns over the top card. The person who first calls out the product of 10 and the upturned card wins the card.

- You can play **Times Snap** using different values (e.g. **Times Snap with 2**, **Times Snap with 3**) in a similar way.
- You can also play **Times Snap with 0** in a similar way: include the picture cards, which count as zero.

Number Facts 4

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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- 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.
- A daily **Challenge section** is included 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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