

Long Division (2): 3-Digit ÷ 1-Digit

NAME: _____ CLASS: _____ DATE: _____ SCORE:

WORKED EXAMPLE • THE MATRIX METHOD™

Complete the long division. $741 \div 3 = ?$

	2	4	7
3	7	4	1
	6		
	1	4	
	1	2	
		2	1
		2	1
			0

- Divide: $7 \div 3 = 2$ remainder 1. Write 2 above the 7.
- Multiply, subtract: $2 \times 3 = 6$, $7 - 6 = 1$
- Bring down the 4 to make 14. $14 \div 3 = 4$ remainder 2.
- Multiply, subtract: $4 \times 3 = 12$, $14 - 12 = 2$
- Bring down the 1 to make 21. $21 \div 3 = 7$.
- Multiply, subtract: $7 \times 3 = 21$, $21 - 21 = 0$

Ans: 247

Complete the long division. Run the cycle once for every digit. [10 marks]

PART A • Every digit divides exactly

(a) $884 \div 4 =$ _____

4	8	8	4

(b) $693 \div 3 =$ _____

3	6	9	3

(c) $862 \div 2 =$ _____

2	8	6	2

(d) $555 \div 5 =$ _____

5	5	5	5



Long Division (2): 3-Digit $\div$ 1-Digit

PART B • Some digits leave a remainder to carry down

(e) $452 \div 4 =$ _____

4	4	5	2
4			

(f) $738 \div 2 =$ _____

2	7	3	8
2			

(g) $875 \div 5 =$ _____

5	8	7	5
5			

(h) $954 \div 3 =$ _____

3	9	5	4
3			

(i) $837 \div 3 =$ _____

3	8	3	7
3			

(j) $296 \div 4 =$ _____

4	2	9	6
4			

Answer Key — Long Division (2): 3-Digit ÷ 1-Digit

MATRIX METHOD™ • THE STEPS

Step 1: Divide the first digit. Write the answer digit directly above it.

Step 2: Multiply, subtract, bring down the next digit. Repeat.

Step 3: Stop only when every digit of the dividend has been brought down.

(a) $884 \div 4 = 221$

- $8 \div 4 = 2$. $2 \times 4 = 8$, $8 - 8 = 0$
- Bring down 8. $8 \div 4 = 2$. $2 \times 4 = 8$, $8 - 8 = 0$
- Bring down 4. $4 \div 4 = 1$. $1 \times 4 = 4$, $4 - 4 = 0$

(b) $693 \div 3 = 231$

- $6 \div 3 = 2$. $2 \times 3 = 6$, $6 - 6 = 0$
- Bring down 9. $9 \div 3 = 3$. $3 \times 3 = 9$, $9 - 9 = 0$
- Bring down 3. $3 \div 3 = 1$. $1 \times 3 = 3$, $3 - 3 = 0$

(c) $862 \div 2 = 431$

- $8 \div 2 = 4$. $4 \times 2 = 8$, $8 - 8 = 0$
- Bring down 6. $6 \div 2 = 3$. $3 \times 2 = 6$, $6 - 6 = 0$
- Bring down 2. $2 \div 2 = 1$. $1 \times 2 = 2$, $2 - 2 = 0$

(d) $555 \div 5 = 111$

- $5 \div 5 = 1$. $1 \times 5 = 5$, $5 - 5 = 0$
- Bring down 5. $5 \div 5 = 1$. $1 \times 5 = 5$, $5 - 5 = 0$
- Bring down 5. $5 \div 5 = 1$. $1 \times 5 = 5$, $5 - 5 = 0$

(e) $452 \div 4 = 113$

- $4 \div 4 = 1$. $1 \times 4 = 4$, $4 - 4 = 0$
- Bring down 5. $5 \div 4 = 1$ remainder 1. $1 \times 4 = 4$, $5 - 4 = 1$
- Bring down the 2 to make 12. $12 \div 4 = 3$. $3 \times 4 = 12$, $12 - 12 = 0$

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(f) $738 \div 2 = 369$

- $7 \div 2 = 3$ remainder 1. $3 \times 2 = 6$, $7 - 6 = 1$
- Bring down the 3 to make 13. $13 \div 2 = 6$ remainder 1. $6 \times 2 = 12$, $13 - 12 = 1$
- Bring down the 8 to make 18. $18 \div 2 = 9$. $9 \times 2 = 18$, $18 - 18 = 0$

(g) $875 \div 5 = 175$

- $8 \div 5 = 1$ remainder 3. $1 \times 5 = 5$, $8 - 5 = 3$
- Bring down the 7 to make 37. $37 \div 5 = 7$ remainder 2. $7 \times 5 = 35$, $37 - 35 = 2$
- Bring down the 5 to make 25. $25 \div 5 = 5$. $5 \times 5 = 25$, $25 - 25 = 0$

(h) $954 \div 3 = 318$

- $9 \div 3 = 3$. $3 \times 3 = 9$, $9 - 9 = 0$
- Bring down 5. $5 \div 3 = 1$ remainder 2. $1 \times 3 = 3$, $5 - 3 = 2$
- Bring down the 4 to make 24. $24 \div 3 = 8$. $8 \times 3 = 24$, $24 - 24 = 0$

(i) $837 \div 3 = 279$

- $8 \div 3 = 2$ remainder 2. $2 \times 3 = 6$, $8 - 6 = 2$
- Bring down the 3 to make 23. $23 \div 3 = 7$ remainder 2. $7 \times 3 = 21$, $23 - 21 = 2$
- Bring down the 7 to make 27. $27 \div 3 = 9$. $9 \times 3 = 27$, $27 - 27 = 0$

(j) $296 \div 4 = 74$

- 2 is smaller than 4, so the 2 joins the 9. Work with 29.
- $29 \div 4 = 7$ remainder 1. Write 7 above the 9. $7 \times 4 = 28$, $29 - 28 = 1$
- Bring down the 6 to make 16. $16 \div 4 = 4$. $4 \times 4 = 16$, $16 - 16 = 0$
- The answer has only TWO digits, not three.

COMMON ERROR TO WATCH FOR

Pupils run the cycle twice, then stop and copy the last digit straight down instead of dividing it. A 3-digit number divided by a 1-digit number needs the cycle three times — once for every digit of the dividend.