

FIRE JUNGLE

CAPS-aligned mathematics for South African learners



GRADE 2

Mathematics

TEXTBOOK

Definitions • Worked Examples • Exercises • Full Answers



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by Joseph Matthew Mitchell

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Fire Jungle Grade 2 Mathematics

A CAPS-aligned study textbook for the FET phase

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How to use this book

Definitions. Each topic opens with the key terms you must know and be able to state in an exam.

Key formulas. The formulas and rules for the topic, gathered in one box for quick revision.

Worked examples. Fully solved problems. The right-hand notes explain the reason for every step.

Exercises. Practice questions. Try them before checking the back of the book.

Answers. Complete answers with working are collected in the Answers section at the end.

Digital edition. Scan the QR code on any page to open the interactive version of this textbook, with animated lessons, narration and unlimited generated practice.

Tip: work through the worked examples with a pen in hand, then attempt the exercises with the book closed. Use the digital edition for extra randomised practice on any topic you find hard.



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**CHAPTER 1**

Counting and Place Value

- Counting** Counting to 100
- Counting** Counting to 200
- Skip-counting** Skip-counting
- Place** Place value: tens and ones
- Numbers** Writing numbers in words

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Counting to 100



count to 100

DEFINITIONS

Counting on	Saying the next number when you add one more.
After	The number that comes next, one bigger.

KEY FORMULAS

- **Next number = number + 1**
- **The number after 79 is 80**

WORKED EXAMPLES

Example 1: What number comes after 79?

- To find the next number, add 1.

Counting on.

- $79 + 1 = 80$.

Add one.

- **80.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. What number comes after 78?
2. What number comes after 50?
3. What number comes after 77?
4. What number comes after 98?
5. What number comes after 57?
6. What number comes after 64?
7. What number comes after 93?
8. What number comes after 82?
9. What number comes after 83?
10. What number comes after 79?



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Counting to 200



count to 200

DEFINITIONS

Past 100

Numbers keep going after 100: 101, 102, 103...

KEY FORMULAS

- **Next number = number + 1**
- **After 100 comes 101**, after 149 comes 150

WORKED EXAMPLES

Example 1: What number comes after 149?

- Numbers keep going past 100.

Counting on.

- $149 + 1 = 150$.

Add one.

- **150.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. What number comes after 156?
2. What number comes after 149?
3. What number comes after 101?
4. What number comes after 125?
5. What number comes after 140?
6. What number comes after 146?
7. What number comes after 108?
8. What number comes after 198?
9. What number comes after 155?
10. What number comes after 185?

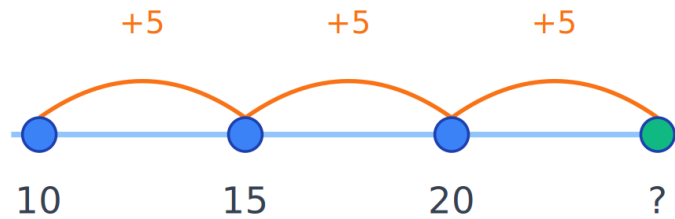


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Skip-counting by 2s, 5s, 10s



jump +5 each time

next: $20 + 5 = 25$

DEFINITIONS

Skip-count

Counting in jumps of the same size, like 2, 4, 6, 8.

KEY FORMULAS

- **Skip-count by 2:** 2, 4, 6, 8...
- **Skip-count by 5:** 5, 10, 15, 20...
- **Add the same step each time**

WORKED EXAMPLES

Example 1: Skip-count by 5: 10, 15, 20, __

- We are adding 5 each time.

The step.

- $20 + 5 = 25$.

Add the step.

- **25.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Skip-count by 2: 10, 12, 14, __
2. Skip-count by 5: 35, 40, 45, __
3. Skip-count by 10: 70, 80, 90, __
4. Skip-count by 5: 30, 35, 40, __
5. Skip-count by 10: 40, 50, 60, __
6. Skip-count by 2: 8, 10, 12, __
7. Skip-count by 2: 14, 16, 18, __
8. Skip-count by 2: 12, 14, 16, __
9. Skip-count by 5: 40, 45, 50, __



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10. Skip-count by 10: 50, 60, 70, __

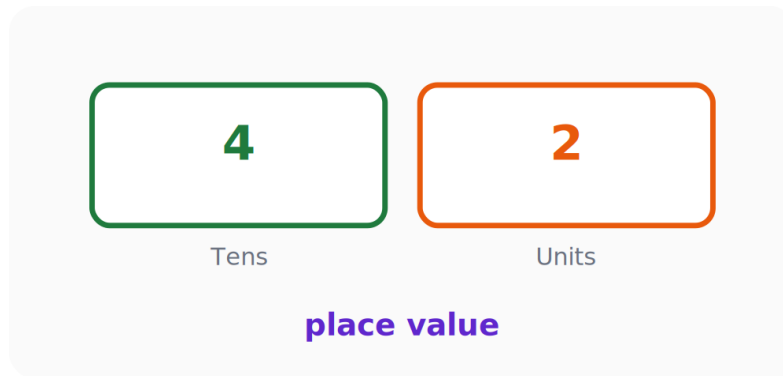


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Place value: tens and ones



DEFINITIONS

Tens	Groups of ten. 3 tens = 30.
Units (ones)	Single items, less than ten.

KEY FORMULAS

- **Number = (tens $\times$ 10) + units**
- **4 tens and 7 units = 47**

WORKED EXAMPLES

Example 1: What number is 4 tens and 7 units?

- 4 tens = 40.
Tens $\times$ 10.
- $40 + 7 = 47$.
Add the units.
- **47.**
Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. What number is 2 tens and 2 units?
2. What number is 3 tens and 8 units?
3. What number is 6 tens and 6 units?
4. What number is 2 tens and 7 units?
5. What number is 7 tens and 3 units?
6. What number is 8 tens and 1 units?
7. What number is 1 tens and 7 units?
8. What number is 1 tens and 8 units?
9. What number is 2 tens and 1 units?
10. What number is 2 tens and 8 units?



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Numbers in words to 100

Writing numbers in words

23 = twenty-three

numbers in words

DEFINITIONS

Number name How we write a number using words instead of digits.

KEY FORMULAS

- **Tens words:** twenty, thirty, forty, fifty...
- **Join with a hyphen:** 47 → forty-seven

WORKED EXAMPLES

Example 1: Write 47 in words.

- Split into 40 and 7.

Tens and units.

- 40 is 'forty', 7 is 'seven'.

Name each part.

- Join: forty-seven.

Combine.

- **forty-seven.**

Final answer.

End of Chapter 1 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. What number comes after 78?
2. What number comes after 149?
3. Skip-count by 10: 70, 80, 90, __
4. What number is 2 tens and 7 units?
5. What number comes after 57?
6. What number comes after 146?
7. Skip-count by 2: 14, 16, 18, __
8. What number is 1 tens and 8 units?
9. What number comes after 83?
10. What number comes after 185?



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CHAPTER 2

Comparing and Ordering

Compare Comparing numbers

Order Ordering numbers

Greatest Greatest and least



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Compare numbers up to 200

Comparing numbers

$$46 > 29$$

compare the numbers

DEFINITIONS

Greater than ($>$) The bigger number. The open mouth faces the bigger one.

Less than ($<$) The smaller number.

KEY FORMULAS

- **Compare from the LEFT** — hundreds first, then tens, then units
- **First place that differs decides it**

WORKED EXAMPLES

Example 1: Compare 45 and 78. Use $<$, $>$, or $=$.

- Look at the tens: 4 vs 7.

First place.

- 7 is bigger, so 45 is smaller.

Bigger tens wins.

- **$45 < 78$.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Compare 188 __ 160
2. Compare 125 __ 133
3. Compare 47 __ 152
4. Compare 33 __ 139
5. Compare 155 __ 147
6. Compare 135 __ 44
7. Compare 156 __ 140
8. Compare 182 __ 74
9. Compare 188 __ 84
10. Compare 176 __ 157



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Order from smallest to biggest

Ordering numbers

$$46 > 29$$

compare the numbers

DEFINITIONS

Order

Put numbers in line from smallest to biggest.

KEY FORMULAS

- **Compare the numbers**, then line them up
- **Smallest first** for smallest-to-biggest

WORKED EXAMPLES

Example 1: Order 30, 15, 22 from smallest first.

- Find the smallest: 15.

Lowest.

- Then 22, then 30.

Next smallest.

- **15, 22, 30.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Order 75, 24, 59 smallest first:
2. Order 49, 10, 55 smallest first:
3. Order 26, 60, 40 smallest first:
4. Order 54, 74, 29 smallest first:
5. Order 35, 52, 41 smallest first:
6. Order 85, 12, 98 smallest first:
7. Order 81, 61, 78 smallest first:
8. Order 73, 21, 37 smallest first:
9. Order 21, 17, 56 smallest first:
10. Order 91, 84, 83 smallest first:



DIGITAL TEXTBOOK

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in the interactive edition (B.2)



Greatest and least

$$46 > 29$$

compare the numbers

DEFINITIONS

Greatest The biggest number.

Least (smallest) The smallest number.

KEY FORMULAS

- Compare all the numbers
- Smallest = least, biggest = greatest

WORKED EXAMPLES

Example 1: Which is smallest: 34, 56, 21?

- Compare all three.

Look at each.

- 21 is the smallest.

Lowest number.

- **21.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Smallest of 58, 66, 66?
2. Smallest of 94, 75, 50?
3. Smallest of 17, 59, 55?
4. Smallest of 43, 13, 37?
5. Smallest of 58, 33, 63?
6. Smallest of 87, 82, 57?
7. Smallest of 74, 23, 62?
8. Smallest of 66, 92, 11?
9. Smallest of 71, 53, 22?
10. Smallest of 11, 85, 65?



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End of Chapter 2 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. Compare 188 $\underline{\hspace{1cm}}$ 160
2. Order 49, 10, 55 smallest first:
3. Smallest of 17, 59, 55?
4. Compare 33 $\underline{\hspace{1cm}}$ 139
5. Order 35, 52, 41 smallest first:
6. Smallest of 87, 82, 57?
7. Compare 156 $\underline{\hspace{1cm}}$ 140
8. Order 73, 21, 37 smallest first:
9. Smallest of 71, 53, 22?
10. Compare 176 $\underline{\hspace{1cm}}$ 157





CHAPTER 3

Addition

- Add** Adding 1-digit numbers
- Add** Adding 2-digit numbers
- Add** Adding with carrying
- Add** Adding tens
- Word** Addition word problems



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Add 1-digit numbers

Adding 1-digit numbers


$$1 + 4 = 5$$

$$1 + 4 = 5$$

DEFINITIONS

Add Join two groups together to find how many in total.

Count on Start at one number and count forward.

KEY FORMULAS

- Start at the first number, count on the second
- Example: $6 + 3 = 7, 8, 9$

WORKED EXAMPLES

Example 1: What is $6 + 3$?

- Start at 6.

First number.

- Count on 3 more: 7, 8, 9.

Count forward.

- 9.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $6 + 5 = ?$
2. $6 + 4 = ?$
3. $2 + 5 = ?$
4. $1 + 5 = ?$
5. $8 + 9 = ?$
6. $1 + 7 = ?$
7. $9 + 5 = ?$
8. $7 + 5 = ?$
9. $2 + 7 = ?$
10. $8 + 5 = ?$



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Add 2-digit (no regrouping)

Adding 2-digit numbers

Two blue dots are shown to the left of a plus sign. To the right of the plus sign are four orange dots arranged in two rows of two. To the right of the dots is an equals sign followed by a green number 6.

$$2 + 4 = 6$$

DEFINITIONS

Column addition

Stacking numbers so tens line up with tens, units with units.

KEY FORMULAS

- **Add the units first**
- **Then add the tens**
- **No carrying** when each column adds to less than 10

WORKED EXAMPLES

Example 1: Calculate $23 + 14$.

- Add units: $3 + 4 = 7$.

Units column.

- Add tens: $2 + 1 = 3$.

Tens column.

- **37.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $31 + 30 = ?$
2. $27 + 25 = ?$
3. $17 + 31 = ?$
4. $39 + 32 = ?$
5. $22 + 11 = ?$
6. $37 + 28 = ?$
7. $12 + 42 = ?$
8. $13 + 47 = ?$
9. $24 + 14 = ?$
10. $23 + 16 = ?$



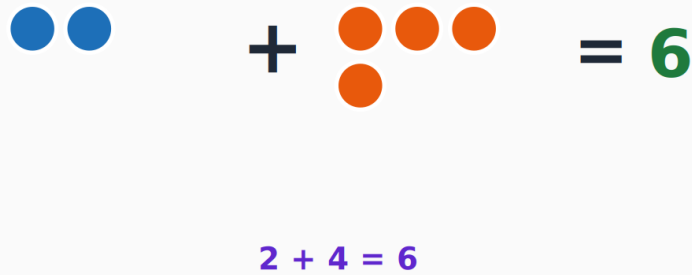
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Add 2-digit (with regrouping)

Adding with carrying



A diagram showing two blue circles representing tens and four orange circles representing units. A plus sign is between them, followed by an equals sign and a green number 6. Below the diagram, the equation $2 + 4 = 6$ is written in purple.

$$2 + 4 = 6$$

DEFINITIONS

Carrying (regrouping)

When the units add to 10 or more, carry the extra ten across.

KEY FORMULAS

- **Add the units**
- **Carry** when the units reach 10 or more
- **The carried 1 joins the tens**

WORKED EXAMPLES

Example 1: Calculate $27 + 18$.

- Units: $7 + 8 = 15$. Write 5, carry 1.

Over 10 — carry.

- Tens: $2 + 1 + 1 = 4$.

Add the carry.

- **45.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $39 + 34 = ?$
2. $20 + 31 = ?$
3. $45 + 30 = ?$
4. $41 + 16 = ?$
5. $21 + 18 = ?$
6. $42 + 39 = ?$
7. $16 + 28 = ?$
8. $32 + 29 = ?$
9. $23 + 26 = ?$
10. $30 + 44 = ?$



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Add multiples of 10

Adding tens



$$5 + 4 = 9$$

DEFINITIONS

Multiple of 10 A number that ends in 0, like 20, 30, 40.

KEY FORMULAS

- **Add the tens digits, then add a 0**
- **Example:** $30 + 40 = 70$ (think $3 + 4 = 7$)

WORKED EXAMPLES

Example 1: Calculate $30 + 40$.

► Think $3 + 4 = 7$.

Just the tens.

► Put back the 0: 70.

Add a zero.

► **70.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $50 + 20 = ?$
2. $50 + 60 = ?$
3. $60 + 40 = ?$
4. $20 + 30 = ?$
5. $40 + 20 = ?$
6. $30 + 80 = ?$
7. $50 + 70 = ?$
8. $20 + 20 = ?$
9. $80 + 40 = ?$
10. $60 + 50 = ?$



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Word problems: addition

Addition word problems

$$\bullet \bullet \bullet + \bullet \bullet = 5$$

$$3 + 2 = 5$$

DEFINITIONS

Word problem A maths question written as a short story.

Gets more / altogether Words that mean add — the amount goes up.

KEY FORMULAS

- 'Gets more' or 'in total' means add
- Add the two amounts together

WORKED EXAMPLES

Example 1: Lerato has 20 marbles. She gets 15 more. How many in total?

- ▶ 'Gets more' means add.

Amount goes up.

- ▶ $20 + 15 = 35$.

Add.

- ▶ **35.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Lerato has 27 marbles. She gets 28 more. How many in total?
2. Lerato has 32 marbles. She gets 22 more. How many in total?
3. Lerato has 39 marbles. She gets 11 more. How many in total?
4. Lerato has 19 marbles. She gets 16 more. How many in total?
5. Lerato has 37 marbles. She gets 20 more. How many in total?
6. Lerato has 20 marbles. She gets 18 more. How many in total?
7. Lerato has 39 marbles. She gets 10 more. How many in total?
8. Lerato has 27 marbles. She gets 20 more. How many in total?
9. Lerato has 35 marbles. She gets 29 more. How many in total?
10. Lerato has 34 marbles. She gets 17 more. How many in total?



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End of Chapter 3 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. $6 + 5 = ?$
2. $27 + 25 = ?$
3. $45 + 30 = ?$
4. $20 + 30 = ?$
5. Lerato has 37 marbles. She gets 20 more. How many in total?
6. $1 + 7 = ?$
7. $12 + 42 = ?$
8. $32 + 29 = ?$
9. $80 + 40 = ?$
10. Lerato has 34 marbles. She gets 17 more. How many in total?





CHAPTER 4

Subtraction

Subtract Subtracting 1-digit numbers

Subtract Subtracting 2-digit numbers

Subtract Subtracting from tens

Word Subtraction word problems



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Subtract 1-digit numbers

Subtracting 1-digit numbers



$$8 - 1 = 7$$

DEFINITIONS

Subtract Take away to find how many are left.

Count back Start at a number and count down.

KEY FORMULAS

- Start at the first number, count back the second
- Example: $9 - 3 = 8, 7, 6$

WORKED EXAMPLES

Example 1: What is $9 - 3$?

- Start at 9.

First number.

- Count back 3: 8, 7, 6.

Count down.

- 6.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $4 - 4 = ?$
2. $7 - 4 = ?$
3. $2 - 2 = ?$
4. $2 - 1 = ?$
5. $8 - 4 = ?$
6. $9 - 2 = ?$
7. $7 - 3 = ?$
8. $4 - 3 = ?$
9. $6 - 6 = ?$
10. $3 - 3 = ?$



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Subtract 2-digit (no regrouping)

Subtracting 2-digit numbers



$$8 - 2 = 6$$

DEFINITIONS

Column subtraction

Line up tens with tens and units with units, then subtract each.

KEY FORMULAS

- Subtract the units first
- Then subtract the tens

WORKED EXAMPLES

Example 1: Calculate $58 - 23$.

- Subtract units: $8 - 3 = 5$.

Units column.

- Subtract tens: $5 - 2 = 3$.

Tens column.

- **35.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $94 - 35 = ?$
2. $83 - 71 = ?$
3. $56 - 39 = ?$
4. $86 - 51 = ?$
5. $85 - 49 = ?$
6. $76 - 50 = ?$
7. $57 - 33 = ?$
8. $93 - 23 = ?$
9. $54 - 15 = ?$
10. $95 - 14 = ?$



DIGITAL TEXTBOOK

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Subtract from multiples of 10

Subtracting from tens



$$8 - 6 = 2$$

DEFINITIONS

Multiple of 10 A number that ends in 0, like 40, 50, 60.

KEY FORMULAS

- Take the smaller number away from the ten
- **Example:** $50 - 30 = 20$

WORKED EXAMPLES

Example 1: Calculate $50 - 30$.

- Think 5 tens take away 3 tens.

Tens only.

- $5 - 3 = 2$, so 20.

Add a zero.

- **20.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $60 - 56 = ?$
2. $80 - 26 = ?$
3. $60 - 23 = ?$
4. $30 - 27 = ?$
5. $30 - 11 = ?$
6. $60 - 8 = ?$
7. $70 - 12 = ?$
8. $40 - 18 = ?$
9. $70 - 61 = ?$
10. $60 - 39 = ?$



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Word problems: subtraction

Subtraction word problems



$$7 - 3 = 4$$

DEFINITIONS

Word problem A maths question written as a short story.

Fly away / left Words that mean subtract — the amount goes down.

KEY FORMULAS

- 'Fly away' or 'how many left' means subtract
- Take the smaller amount away

WORKED EXAMPLES

Example 1: There are 30 birds. 12 fly away. How many are left?

- ▶ 'Fly away' means subtract.

Amount goes down.

- ▶ $30 - 12 = 18$.

Subtract.

- ▶ **18.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. There are 39 birds. 15 fly away. How many left?
2. There are 33 birds. 20 fly away. How many left?
3. There are 20 birds. 10 fly away. How many left?
4. There are 35 birds. 5 fly away. How many left?
5. There are 20 birds. 7 fly away. How many left?
6. There are 23 birds. 8 fly away. How many left?
7. There are 36 birds. 29 fly away. How many left?
8. There are 25 birds. 6 fly away. How many left?
9. There are 26 birds. 15 fly away. How many left?
10. There are 28 birds. 13 fly away. How many left?



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End of Chapter 4 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. $4 - 4 = ?$
2. $83 - 71 = ?$
3. $60 - 23 = ?$
4. There are 35 birds. 5 fly away. How many left?
5. $8 - 4 = ?$
6. $76 - 50 = ?$
7. $70 - 12 = ?$
8. There are 25 birds. 6 fly away. How many left?
9. $6 - 6 = ?$
10. $95 - 14 = ?$



**CHAPTER 5**

Multiplication

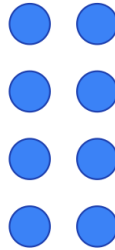
- Multiply** Multiplying by 2
- Multiply** Multiplying by 5
- Multiply** Multiplying by 10
- Repeated** Repeated addition





Multiply by 2

Multiplying by 2



$$4 \times 2 = 8$$

4 rows of 2

DEFINITIONS

Multiply

Adding the same number many times.

Doubling

Multiplying by 2 is the same as adding a number to itself.

KEY FORMULAS

- $a \times 2 = a + a$ (double it)
- **Example:** $4 \times 2 = 4 + 4 = 8$

WORKED EXAMPLES

Example 1: What is 4×2 ?

- $\times 2$ means double, so $4 + 4$.

Doubling.

- $4 + 4 = 8$.

Add.

- **8.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $6 \times 2 = ?$
2. $5 \times 2 = ?$
3. $9 \times 2 = ?$
4. $4 \times 2 = ?$
5. $8 \times 2 = ?$
6. $10 \times 2 = ?$
7. $7 \times 2 = ?$

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8. $2 \times 2 = ?$

9. $3 \times 2 = ?$

10. $1 \times 2 = ?$

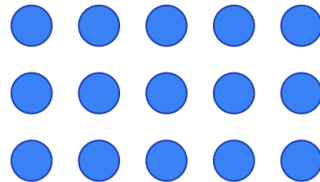
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Multiply by 5

Multiplying by 5



$$3 \times 5 = 15$$

3 rows of 5

DEFINITIONS

5 times table Counting in fives: 5, 10, 15, 20...

KEY FORMULAS

- **Skip-count in fives:** 5, 10, 15, 20...
- **Answers end in 0 or 5**

WORKED EXAMPLES

Example 1: What is 3×5 ?

- Skip-count three fives: 5, 10, 15.

Counting.

- **15.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $3 \times 5 = ?$
2. $5 \times 5 = ?$
3. $7 \times 5 = ?$
4. $1 \times 5 = ?$
5. $2 \times 5 = ?$
6. $9 \times 5 = ?$
7. $6 \times 5 = ?$
8. $4 \times 5 = ?$
9. $10 \times 5 = ?$
10. $8 \times 5 = ?$



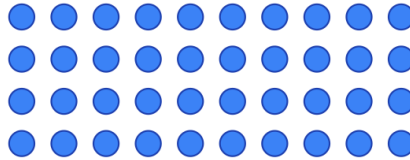
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Multiply by 10

Multiplying by 10



$$4 \times 10 = 40$$

4 rows of 10

DEFINITIONS

10 times table Multiplying by 10 just adds a zero.

KEY FORMULAS

- $\times 10 \rightarrow$ add a 0
- **Example:** $6 \times 10 = 60$

WORKED EXAMPLES

Example 1: What is 6×10 ?

► $\times 10$ means add a zero.

The trick.

► $6 \rightarrow 60$.

Add a zero.

► **60.**

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. $9 \times 10 = ?$
2. $5 \times 10 = ?$
3. $7 \times 10 = ?$
4. $3 \times 10 = ?$
5. $4 \times 10 = ?$
6. $10 \times 10 = ?$
7. $1 \times 10 = ?$
8. $6 \times 10 = ?$



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9. $2 \times 10 = ?$

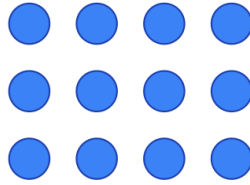
10. $8 \times 10 = ?$

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Repeated addition



$$3 \times 4 = 12$$

3 rows of 4

DEFINITIONS

Repeated addition

Adding the same number again and again — the same as multiplying.

KEY FORMULAS

- $a + a + a = a \times 3$
- The number of groups is the times

WORKED EXAMPLES

Example 1: $4 + 4 + 4 = 4 \times ?$

- Count how many 4s: there are 3.

Count the groups.

- So $4 + 4 + 4 = 4 \times 3$.

Same as multiplying.

- **3.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $5 + 5 + 5 = 5 \times ?$
2. $4 + 4 + 4 = 4 \times ?$
3. $3 + 3 + 3 = 3 \times ?$
4. $2 + 2 + 2 = 2 \times ?$

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End of Chapter 5 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. $6 \times 2 = ?$
2. $5 \times 5 = ?$
3. $7 \times 10 = ?$
4. $2 + 2 + 2 = 2 \times ?$
5. $8 \times 2 = ?$
6. $9 \times 5 = ?$
7. $1 \times 10 = ?$
8. $5 + 5 + 5 = 5 \times ?$
9. $3 \times 2 = ?$
10. $8 \times 5 = ?$





CHAPTER 6

Division

Sharing Sharing equally

Divide Dividing by 2

Divide Dividing by 5

Divide Dividing by 10



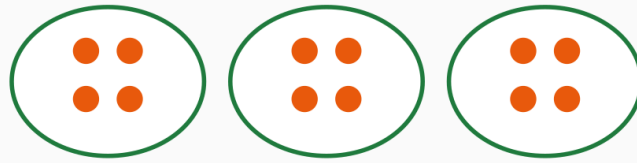
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Sharing into equal groups

Sharing equally



12 shared into 3 groups

DEFINITIONS

Divide	Sharing a number into equal groups.
Equal groups	Groups that all have the same amount.

KEY FORMULAS

- **Total ÷ number of groups = amount in each group**
- **Example:** $10 \div 2 = 5$ each

WORKED EXAMPLES

Example 1: Share 10 sweets between 2 children. How many each?

- Divide 10 by 2.

Share equally.

- $10 \div 2 = 5$.

Each group.

- **5 each.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Share 4 sweets between 2 children. Each gets?
2. Share 10 sweets between 2 children. Each gets?
3. Share 15 sweets between 5 children. Each gets?
4. Share 25 sweets between 5 children. Each gets?
5. Share 20 sweets between 5 children. Each gets?
6. Share 6 sweets between 2 children. Each gets?
7. Share 8 sweets between 2 children. Each gets?
8. Share 10 sweets between 5 children. Each gets?



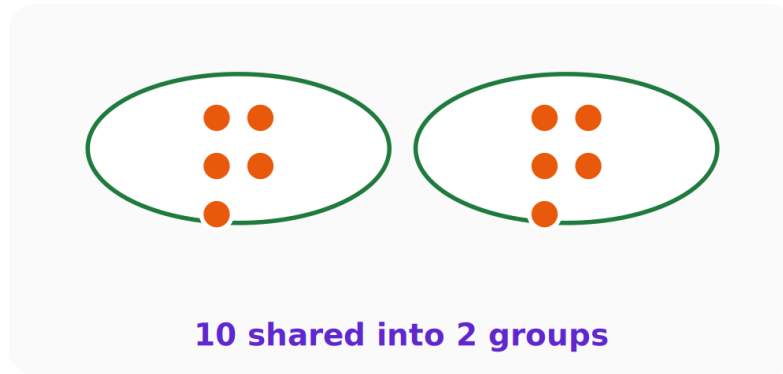
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Divide by 2

Dividing by 2



DEFINITIONS

Halving

Dividing by 2 means splitting into two equal halves.

KEY FORMULAS

- $\div 2$ means split into 2 equal halves
- **Example:** $8 \div 2 = 4$

WORKED EXAMPLES

Example 1: What is $8 \div 2$?

- Split 8 into two equal halves.

Halving.

- Each half is 4.

Half of 8.

- **4.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $2 \div 2 = ?$
2. $18 \div 2 = ?$
3. $6 \div 2 = ?$
4. $12 \div 2 = ?$
5. $14 \div 2 = ?$
6. $20 \div 2 = ?$
7. $16 \div 2 = ?$
8. $4 \div 2 = ?$
9. $10 \div 2 = ?$
10. $8 \div 2 = ?$



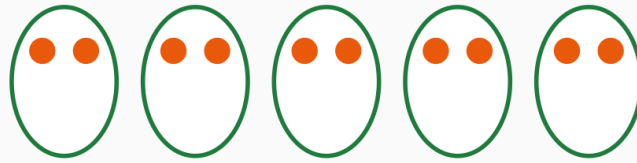
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Divide by 5

Dividing by 5



12 shared into 5 groups

DEFINITIONS

Divide by 5 Sharing into 5 equal groups.

KEY FORMULAS

- **Ask:** 5 times what gives the number?
- **Example:** $20 \div 5 = 4$ because $5 \times 4 = 20$

WORKED EXAMPLES

Example 1: What is $20 \div 5$?

► Ask: 5 times what gives 20?

Use the 5 table.

► $5 \times 4 = 20$.

Find it.

► **4.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $10 \div 5 = ?$
2. $45 \div 5 = ?$
3. $25 \div 5 = ?$
4. $20 \div 5 = ?$
5. $5 \div 5 = ?$
6. $50 \div 5 = ?$
7. $40 \div 5 = ?$
8. $30 \div 5 = ?$
9. $35 \div 5 = ?$
10. $15 \div 5 = ?$



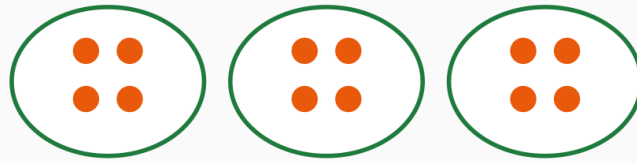
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Divide by 10

Dividing by 10



12 shared into 3 groups

DEFINITIONS

Divide by 10 Just drop the zero from the end of a multiple of 10.

KEY FORMULAS

- $\div 10 \rightarrow$ drop the 0
- **Example:** $60 \div 10 = 6$

WORKED EXAMPLES

Example 1: What is $60 \div 10$?

- $\div 10$ means drop the zero.

The trick.

- $60 \rightarrow 6$.

Drop the 0.

- **6.**

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. $100 \div 10 = ?$
2. $40 \div 10 = ?$
3. $30 \div 10 = ?$
4. $20 \div 10 = ?$
5. $90 \div 10 = ?$
6. $80 \div 10 = ?$
7. $60 \div 10 = ?$
8. $10 \div 10 = ?$
9. $50 \div 10 = ?$
10. $70 \div 10 = ?$



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End of Chapter 6 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. Share 4 sweets between 2 children. Each gets?
2. $18 \div 2 = ?$
3. $25 \div 5 = ?$
4. $20 \div 10 = ?$
5. Share 20 sweets between 5 children. Each gets?
6. $20 \div 2 = ?$
7. $40 \div 5 = ?$
8. $10 \div 10 = ?$
9. Share 10 sweets between 5 children. Each gets?
10. $8 \div 2 = ?$



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**CHAPTER 7**

Fractions

Halves Finding a half

Quarters Finding a quarter

Thirds Finding a third

Identify Identifying fractions

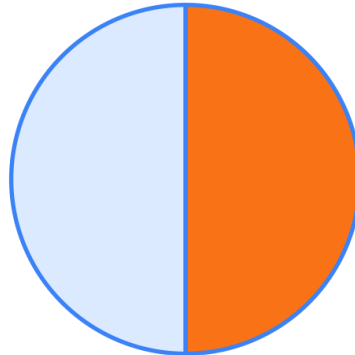
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Halves

Finding a half



8 split into 2 = 4 each

one orange part = 4

DEFINITIONS

Half

One of two equal parts. Half means divide by 2.

KEY FORMULAS

- **Half of a number = number $\div$ 2**
- **Example:** half of 8 = 4

WORKED EXAMPLES

Example 1: What is half of 8?

- Half means divide by 2.

Two equal parts.

- $8 \div 2 = 4$.

Divide.

- **4.**

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. Half of 4 =
2. Half of 8 =
3. Half of 10 =
4. Half of 6 =



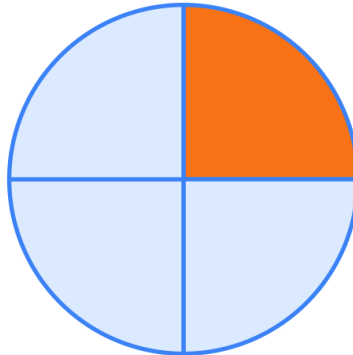
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Quarters

Finding a quarter



12 split into 4 = 3 each

one orange part = 3

DEFINITIONS

Quarter

One of four equal parts. A quarter means divide by 4.

KEY FORMULAS

- **Quarter of a number = number $\div$ 4**
- **Example:** quarter of 12 = 3

WORKED EXAMPLES

Example 1: What is a quarter of 12?

- A quarter means divide by 4.

Four equal parts.

- $12 \div 4 = 3$.

Divide.

- **3.**

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. Quarter of 16 =
2. Quarter of 12 =
3. Quarter of 8 =
4. Quarter of 20 =
5. Quarter of 4 =



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Thirds

Finding a third



9 split into $3 = 3$ each
one orange part = 3

DEFINITIONS

Third

One of three equal parts. A third means divide by 3.

KEY FORMULAS

- **Third of a number = number $\div$ 3**
- **Example:** third of 9 = 3

WORKED EXAMPLES

Example 1: What is a third of 9?

- A third means divide by 3.

Three equal parts.

- $9 \div 3 = 3$.

Divide.

- **3.**

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. A third of 12 =
2. A third of 15 =
3. A third of 6 =
4. A third of 9 =
5. A third of 3 =



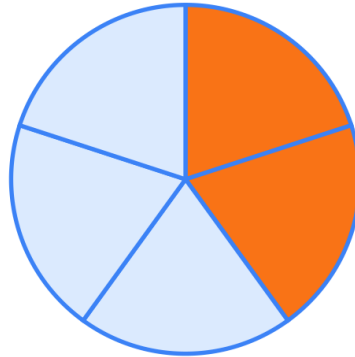
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Identify a fraction

Identifying fractions



$\frac{2}{5}$ shaded

2 orange of 5 equal parts

DEFINITIONS

Fraction	A part of a whole, written top over bottom.
Numerator / denominator	Top number = parts shaded; bottom number = total parts.

KEY FORMULAS

- **Fraction = shaded parts over total parts**
- **Top = shaded, bottom = total**

WORKED EXAMPLES

Example 1: 2 of 5 parts are shaded. What fraction is shaded?

- Top = parts shaded = 2.

Numerator.

- Bottom = total parts = 5.

Denominator.

- $\frac{2}{5}$.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. If 1 of 2 parts are shaded, what fraction is shaded?
2. If 2 of 5 parts are shaded, what fraction is shaded?
3. If 1 of 4 parts are shaded, what fraction is shaded?
4. If 3 of 5 parts are shaded, what fraction is shaded?
5. If 1 of 5 parts are shaded, what fraction is shaded?
6. If 3 of 4 parts are shaded, what fraction is shaded?



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7. If 1 of 3 parts are shaded, what fraction is shaded?
8. If 2 of 4 parts are shaded, what fraction is shaded?
9. If 2 of 3 parts are shaded, what fraction is shaded?

End of Chapter 7 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. Half of 4 =
2. Quarter of 12 =
3. A third of 6 =
4. If 3 of 5 parts are shaded, what fraction is shaded?
5. Half of 6 =
6. Quarter of 4 =
7. A third of 3 =
8. If 2 of 4 parts are shaded, what fraction is shaded?
9. Half of 8 =
10. Quarter of 16 =





CHAPTER 8

Money

Coin Counting coins

Making Making change

Word Money word problems



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Coin combinations

Counting coins



DEFINITIONS

Rand (R)

South African money. We have R1, R2, R5 coins.

KEY FORMULAS

- Multiply each coin by how many, then add
- Example: $3 \times R1 + 2 \times R2 = R3 + R4 = R7$

WORKED EXAMPLES

Example 1: $3 \times R1 + 2 \times R2 = R?$

► $3 \times R1 = R3$.

Count the R1s.

► $2 \times R2 = R4$.

Count the R2s.

► $R3 + R4 = R7$.

Add.

► **R7.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $4 \times R1 + 3 \times R2 = R?$
2. $5 \times R1 + 3 \times R2 = R?$
3. $2 \times R1 + 5 \times R2 = R?$
4. $5 \times R1 + 4 \times R2 = R?$
5. $4 \times R1 + 5 \times R2 = R?$
6. $4 \times R1 + 2 \times R2 = R?$
7. $2 \times R1 + 4 \times R2 = R?$
8. $3 \times R1 + 4 \times R2 = R?$
9. $3 \times R1 + 3 \times R2 = R?$
10. $5 \times R1 + 2 \times R2 = R?$



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Making change



DEFINITIONS

Change

The money you get back: what you paid minus the price.

KEY FORMULAS

- **Change = money paid – price**
- **Example:** paid R10, cost R6 → change R4

WORKED EXAMPLES

Example 1: A toy costs R6. You pay R10. What is the change?

- Change = paid – price.

The rule.

- $R10 - R6 = R4$.

Subtract.

- **R4.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Cost R6, paid R10. Change?
2. Cost R8, paid R10. Change?
3. Cost R5, paid R10. Change?
4. Cost R4, paid R10. Change?
5. Cost R3, paid R10. Change?
6. Cost R7, paid R10. Change?
7. Cost R9, paid R10. Change?

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Word problems: money

Money word problems



$$7 - 3 = 4$$

DEFINITIONS

Buys / spends Words that mean subtract — money goes down.

KEY FORMULAS

- 'Buys' means subtract the cost
- Money left = start – cost

WORKED EXAMPLES

Example 1: Sipho has R8. He buys a sweet for R3. How much is left?

- 'Buys' means subtract.

Money goes down.

- $R8 - R3 = R5$.

Subtract.

- **R5.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Sipho has R7. He buys a sweet for R6. How much left?
2. Sipho has R9. He buys a sweet for R3. How much left?
3. Sipho has R8. He buys a sweet for R2. How much left?
4. Sipho has R8. He buys a sweet for R6. How much left?
5. Sipho has R5. He buys a sweet for R3. How much left?
6. Sipho has R5. He buys a sweet for R2. How much left?
7. Sipho has R7. He buys a sweet for R5. How much left?
8. Sipho has R7. He buys a sweet for R2. How much left?
9. Sipho has R9. He buys a sweet for R7. How much left?
10. Sipho has R9. He buys a sweet for R6. How much left?



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End of Chapter 8 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. $4 \times R1 + 3 \times R2 = R?$
2. Cost R8, paid R10. Change?
3. Sipho has R8. He buys a sweet for R2. How much left?
4. $5 \times R1 + 4 \times R2 = R?$
5. Cost R3, paid R10. Change?
6. Sipho has R5. He buys a sweet for R2. How much left?
7. $2 \times R1 + 4 \times R2 = R?$
8. Cost R9, paid R10. Change?
9. Sipho has R9. He buys a sweet for R7. How much left?
10. $5 \times R1 + 2 \times R2 = R?$





CHAPTER 9

Time

Read Reading half past

Read Quarter past and quarter to

Days Days in a week

Months Months in a year



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Read clocks: half past

Reading half past



3:30

short hand = hour, long hand = minutes

DEFINITIONS

Half past

When the long hand points to 6 — it is 30 minutes past the hour.

KEY FORMULAS

- Long hand on 6 = half past = :30
- Example: half past 3 = 3:30

WORKED EXAMPLES

Example 1: The hour hand is just past 3 and the long hand is on 6. What time is it?

- Long hand on 6 means half past.

30 minutes.

- The hour is 3, so it is half past 3.

Read the hour.

- **3:30.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Hour hand between 2 and 3, minute hand on 6. Time?
2. Hour hand between 10 and 11, minute hand on 6. Time?
3. Hour hand between 6 and 7, minute hand on 6. Time?
4. Hour hand between 8 and 9, minute hand on 6. Time?
5. Hour hand between 11 and 12, minute hand on 6. Time?
6. Hour hand between 7 and 8, minute hand on 6. Time?
7. Hour hand between 4 and 5, minute hand on 6. Time?
8. Hour hand between 12 and 1, minute hand on 6. Time?



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9. Hour hand between 3 and 4, minute hand on 6. Time?
10. Hour hand between 9 and 10, minute hand on 6. Time?

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Read clocks: quarter past/to

Quarter past and quarter to



4:15

short hand = hour, long hand = minutes

DEFINITIONS

Quarter past When the long hand points to 3 — 15 minutes past.

KEY FORMULAS

- Long hand on 3 = quarter past = :15
- Example: quarter past 4 = 4:15

WORKED EXAMPLES

Example 1: The long hand is on 3 and the hour is 4. What time is it?

- Long hand on 3 means quarter past.

15 minutes.

- The hour is 4, so 4:15.

Read the hour.

- **4:15.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Minute hand on 3 means quarter past. Hour 1, what time?
2. Minute hand on 3 means quarter past. Hour 12, what time?
3. Minute hand on 3 means quarter past. Hour 5, what time?
4. Minute hand on 3 means quarter past. Hour 3, what time?
5. Minute hand on 3 means quarter past. Hour 11, what time?
6. Minute hand on 3 means quarter past. Hour 6, what time?
7. Minute hand on 3 means quarter past. Hour 2, what time?
8. Minute hand on 3 means quarter past. Hour 7, what time?



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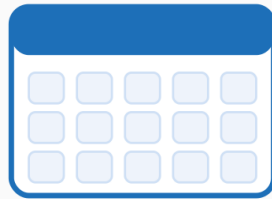
9. Minute hand on 3 means quarter past. Hour 8, what time?
10. Minute hand on 3 means quarter past. Hour 4, what time?

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Days in a week



calendar

DEFINITIONS

Week

Seven days: Monday to Sunday.

KEY FORMULAS

- $1 \text{ week} = 7 \text{ days}$

WORKED EXAMPLES

Example 1: How many days are in a week?

- Count the days: Mon, Tue, Wed, Thu, Fri, Sat, Sun.

Name them.

- That is 7 days.

Count.

- 7.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. How many days in a week?

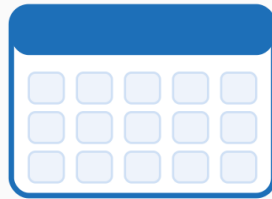


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Months in a year



calendar

DEFINITIONS

Year

Twelve months: January to December.

KEY FORMULAS

- **1 year = 12 months**

WORKED EXAMPLES

Example 1: How many months are in a year?

- ▶ January, February ... December.

Name them.

- ▶ That is 12 months.

Count.

- ▶ **12.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. How many months in a year?

End of Chapter 9 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. Hour hand between 2 and 3, minute hand on 6. Time?
2. Minute hand on 3 means quarter past. Hour 12, what time?
3. How many days in a week?
4. How many months in a year?
5. Hour hand between 11 and 12, minute hand on 6. Time?
6. Minute hand on 3 means quarter past. Hour 6, what time?
7. How many days in a week?
8. How many months in a year?
9. Hour hand between 3 and 4, minute hand on 6. Time?
10. Minute hand on 3 means quarter past. Hour 4, what time?

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**CHAPTER 10**

Measurement

Measure Measuring length in cm

Convert Metres to centimetres

Mass: Grams and kilograms

Capacity: Millilitres and litres

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Measure in cm

Measuring length in cm



measure (cm)

DEFINITIONS

Centimetre (cm) A small unit for measuring length.

Difference How much longer one thing is than another (subtract).

KEY FORMULAS

- **Difference = longer – shorter**
- **Both lengths must be in the same unit (cm)**

WORKED EXAMPLES

Example 1: A pencil is 5 cm. A ruler is 12 cm. What is the difference?

► Difference means subtract.

Longer – shorter.

► $12 - 5 = 7$.

Subtract.

► **7 cm.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Pencil is 8 cm. Ruler is 11 cm. Difference?
2. Pencil is 5 cm. Ruler is 11 cm. Difference?
3. Pencil is 6 cm. Ruler is 12 cm. Difference?
4. Pencil is 4 cm. Ruler is 6 cm. Difference?
5. Pencil is 4 cm. Ruler is 9 cm. Difference?
6. Pencil is 2 cm. Ruler is 4 cm. Difference?
7. Pencil is 3 cm. Ruler is 8 cm. Difference?
8. Pencil is 8 cm. Ruler is 14 cm. Difference?
9. Pencil is 6 cm. Ruler is 9 cm. Difference?
10. Pencil is 3 cm. Ruler is 10 cm. Difference?



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Convert m to cm

Metres to centimetres



measure (cm)

DEFINITIONS

Metre (m) A bigger unit of length. $1 \text{ m} = 100 \text{ cm}$.

KEY FORMULAS

- $1 \text{ m} = 100 \text{ cm}$
- $\text{m} \rightarrow \text{cm}$: multiply by 100

WORKED EXAMPLES

Example 1: How many cm are in 3 m?

► $1 \text{ m} = 100 \text{ cm}$.

Conversion fact.

► $3 \times 100 = 300$.

Multiply.

► **300 cm.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. $4 \text{ m} = ? \text{ cm}$
2. $1 \text{ m} = ? \text{ cm}$
3. $5 \text{ m} = ? \text{ cm}$
4. $3 \text{ m} = ? \text{ cm}$
5. $2 \text{ m} = ? \text{ cm}$



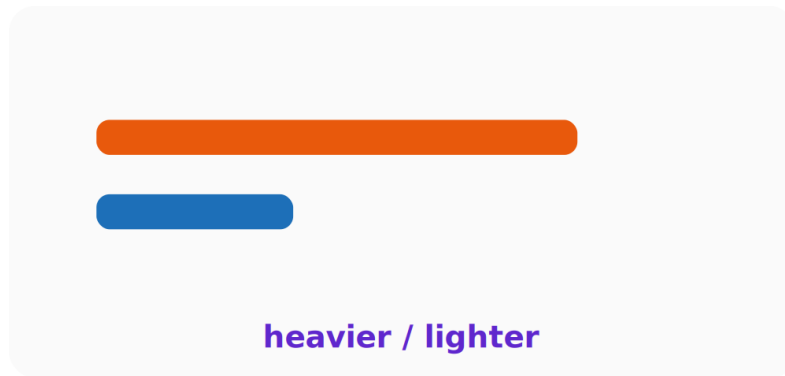
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Mass: g and kg

Grams and kilograms



DEFINITIONS

Mass	How heavy something is.
Gram / kilogram	Units of mass. $1 \text{ kg} = 1000 \text{ g}$.

KEY FORMULAS

- $1 \text{ kg} = 1000 \text{ g}$

WORKED EXAMPLES

Example 1: How many grams are in 1 kg?

- Remember the fact: $1 \text{ kg} = 1000 \text{ g}$.

Mass fact.

- **1000.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. How many g in 1 kg?



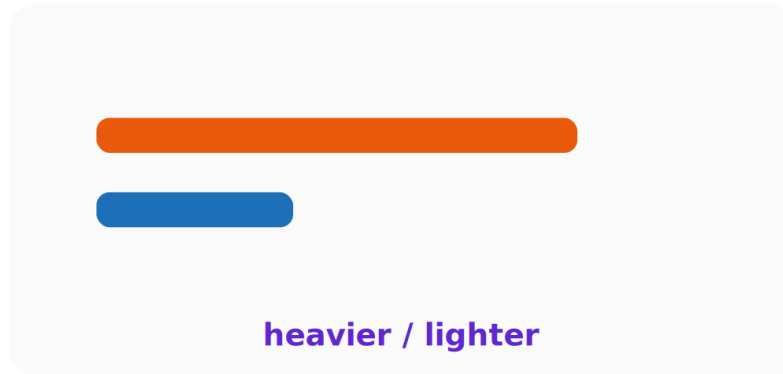
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Capacity: ml and l

Millilitres and litres



DEFINITIONS

Capacity How much liquid a container holds.

Millilitre / litre Units of capacity. 1 L = 1000 ml.

KEY FORMULAS

• 1 L = 1000 ml

WORKED EXAMPLES

Example 1: How many ml are in 1 litre?

► Remember the fact: 1 L = 1000 ml.

Capacity fact.

► **1000.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. How many ml in 1 litre?

End of Chapter 10 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. Pencil is 8 cm. Ruler is 11 cm. Difference?
2. 1 m = ? cm
3. How many g in 1 kg?
4. How many ml in 1 litre?
5. Pencil is 4 cm. Ruler is 9 cm. Difference?
6. 2 m = ? cm
7. How many g in 1 kg?
8. How many ml in 1 litre?
9. Pencil is 6 cm. Ruler is 9 cm. Difference?
10. 4 m = ? cm



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CHAPTER 11

Geometry

Identify 2D shapes

Identify 3D shapes

Symmetry Lines of symmetry

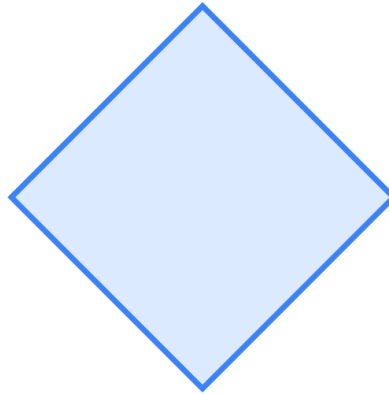


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Identify 2D shapes



4 sides

square

DEFINITIONS

2D shape A flat shape, like a triangle or square.

Side One straight edge of a shape.

KEY FORMULAS

- **Triangle:** 3 sides. **Square:** 4 sides.
- **Pentagon:** 5 sides. **Hexagon:** 6 sides.

WORKED EXAMPLES

Example 1: What shape has 4 sides?

- Count the sides: 4.

Number of edges.

- A 4-sided shape is a square.

Name it.

- **square.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. A shape with 4 sides:
2. A shape with 5 sides:
3. A shape with 6 sides:
4. A shape with 3 sides:

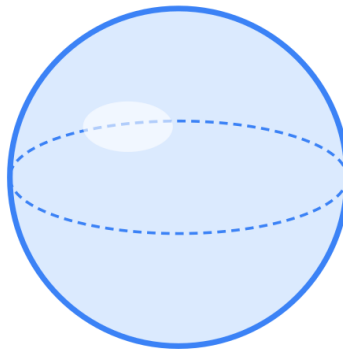


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Identify 3D shapes



sphere

like a ball

DEFINITIONS

3D shape

A solid shape you can hold, like a ball or box.

KEY FORMULAS

- Ball → sphere
- Box → cube
- Can → cylinder

WORKED EXAMPLES

Example 1: A ball is shaped like a what?

- Think of a round ball.

Picture it.

- A ball is a sphere.

Name it.

- **sphere.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. A ball is shaped like a:
2. A box is shaped like a:
3. A can is shaped like a:



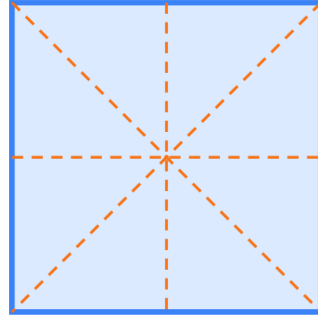
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Symmetry

Lines of symmetry



folds into matching halves

a square has symmetry

DEFINITIONS

Line of symmetry

A line that folds a shape into two matching halves.

KEY FORMULAS

- A shape has symmetry if it folds into matching halves
- A square does fold exactly in half

WORKED EXAMPLES

Example 1: Does a square have a line of symmetry? (yes/no)

- Fold a square in half.

Test the fold.

- The two halves match exactly.

They are the same.

- **yes.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. Does a square have a line of symmetry? (yes/no)



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End of Chapter 11 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. A shape with 4 sides:
2. A box is shaped like a:
3. Does a square have a line of symmetry? (yes/no)
4. A shape with 3 sides:
5. A can is shaped like a:
6. Does a square have a line of symmetry? (yes/no)
7. A shape with 5 sides:
8. A ball is shaped like a:
9. Does a square have a line of symmetry? (yes/no)
10. A shape with 6 sides:





CHAPTER 12

Data and Graphs

Read Reading tally charts

Read Reading pictographs

Most Most and least



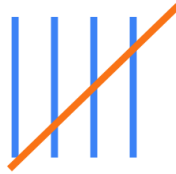
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Read tally charts

Reading tally charts



5 marks = 5

each mark counts as 1

DEFINITIONS

Tally mark

A small line that stands for one. Each mark = 1.

KEY FORMULAS

- Each tally mark = 1
- Count the marks to find the number

WORKED EXAMPLES

Example 1: A tally has 5 marks. What number does it show?

- Each mark = 1.

Tally rule.

- 5 marks = 5.

Count them.

- 5.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. A tally with 4 marks shows what number?
2. A tally with 8 marks shows what number?
3. A tally with 5 marks shows what number?
4. A tally with 9 marks shows what number?
5. A tally with 7 marks shows what number?
6. A tally with 3 marks shows what number?
7. A tally with 6 marks shows what number?

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Read pictographs

Reading pictographs



each ★ = 1

4 stars = 4

count the pictures

DEFINITIONS

Pictograph A graph that uses pictures to show numbers.

Key Tells you how much one picture stands for.

KEY FORMULAS

- Count the pictures $\times$ what each one stands for
- When each picture = 1, just count them

WORKED EXAMPLES

Example 1: A pictograph shows 4 stars for fruit. Each star = 1. How many fruit?

► Each star = 1.

The key.

► 4 stars = 4.

Count them.

► 4.

Final answer.

EXERCISES (EASY $\rightarrow$ DIFFICULT)

1. A pictograph shows 6 stars for "fruit". Each star = 1. How many fruit?
2. A pictograph shows 2 stars for "fruit". Each star = 1. How many fruit?
3. A pictograph shows 4 stars for "fruit". Each star = 1. How many fruit?
4. A pictograph shows 3 stars for "fruit". Each star = 1. How many fruit?
5. A pictograph shows 5 stars for "fruit". Each star = 1. How many fruit?



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Most and least

$$46 > 29$$

compare the numbers

DEFINITIONS

Most	The biggest amount.
Least	The smallest amount.

KEY FORMULAS

- Compare the numbers
- Biggest = most, smallest = least

WORKED EXAMPLES

Example 1: Apples 5, bananas 3, oranges 7. Which is most?

- Compare: 5, 3, 7.
- Look at each.*
- 7 is the biggest (oranges).
- Most.*
- **oranges.**
- Final answer.*

EXERCISES (EASY → DIFFICULT)

1. If apples=5, bananas=3, oranges=7, which is most?

End of Chapter 12 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. A tally with 4 marks shows what number?
2. A pictograph shows 2 stars for "fruit". Each star = 1. How many fruit?
3. If apples=5, bananas=3, oranges=7, which is most?
4. A tally with 9 marks shows what number?
5. A pictograph shows 5 stars for "fruit". Each star = 1. How many fruit?
6. If apples=5, bananas=3, oranges=7, which is most?
7. A tally with 6 marks shows what number?
8. A pictograph shows 6 stars for "fruit". Each star = 1. How many fruit?
9. If apples=5, bananas=3, oranges=7, which is most?
10. A tally with 8 marks shows what number?



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CHAPTER 13

Patterns

Number Number patterns

Shape Shape patterns



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Number patterns



what comes next?

DEFINITIONS

Pattern	A list of numbers that follows a rule.
Difference	The same amount added each time to get the next number.

KEY FORMULAS

- Find the difference between numbers
- Add the difference to get the next
- **Example:** 2, 4, 6, ... rule +2, next is 8

WORKED EXAMPLES

Example 1: Find the next number: 2, 4, 6, __

- Find the difference: $4 - 2 = 2$.

Same each time.

- Add it: $6 + 2 = 8$.

Apply the rule.

- **8.**

Final answer.

EXERCISES (EASY → DIFFICULT)

1. 6, 9, 12, __
2. 9, 11, 13, __
3. 4, 6, 8, __
4. 3, 8, 13, __
5. 8, 13, 18, __
6. 9, 10, 11, __
7. 7, 12, 17, __
8. 3, 7, 11, __
9. 6, 7, 8, __
10. 2, 3, 4, __

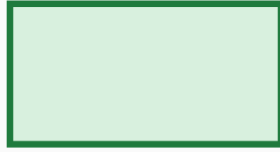


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Shape patterns



rectangle

DEFINITIONS

Shape pattern Shapes that repeat in the same order.

KEY FORMULAS

- Find the part that repeats
- Then say what comes next

WORKED EXAMPLES

Example 1: What comes next? ▲ ■ ▲ ■ _

- The pattern repeats: triangle, square.

Find the repeat.

- After ■ comes ▲ again.

Keep the order.

- ▲.

Final answer.

EXERCISES (EASY → DIFFICULT)

1. ▲ ■ ▲ ■ _

End of Chapter 13 — Mixed Exercise

Ten questions across the whole chapter, from easy to difficult.

1. 6, 9, 12, _
2. ▲ ■ ▲ ■ _
3. 4, 6, 8, _
4. ▲ ■ ▲ ■ _
5. 8, 13, 18, _
6. ▲ ■ ▲ ■ _
7. 7, 12, 17, _
8. ▲ ■ ▲ ■ _
9. 6, 7, 8, _
10. ▲ ■ ▲ ■ _



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ANSWERS

Worked solutions to all exercises

Each answer gives the final result first, followed by the key working steps. For fully animated, step-by-step solutions, open the digital edition with the QR code on any page.

CHAPTER 1 — Counting and Place Value

Counting to 100

1. 79
2. 51
3. 78
4. 99
5. 58
6. 65
7. 94
8. 83
9. 84
10. 80

Counting to 200

1. 157
2. 150
3. 102
4. 126
5. 141
6. 147
7. 109
8. 199
9. 156
10. 186

Skip-counting by 2s, 5s, 10s

1. 16
2. 50
3. 100
4. 45
5. 70
6. 14
7. 20
8. 18
9. 55
10. 80



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**Place value: tens and ones**

1. 22
2. 38
3. 66
4. 27
5. 73
6. 81
7. 17
8. 18
9. 21
10. 28

End of Chapter 1 — Mixed Exercise

1. 79
2. 150
3. 100
4. 27
5. 58
6. 147
7. 20
8. 18
9. 84
10. 186

CHAPTER 2 — Comparing and Ordering**Compare numbers up to 200**

1. >
2. <
3. <
4. <
5. >
6. >
7. >
8. >
9. >
10. >

Order from smallest to biggest

1. 24,59,75
2. 10,49,55
3. 26,40,60
4. 29,54,74
5. 35,41,52
6. 12,85,98
7. 61,78,81
8. 21,37,73
9. 17,21,56
10. 83,84,91



**Greatest and least**

1. 58
2. 50
3. 17
4. 13
5. 33
6. 57
7. 23
8. 11
9. 22
10. 11

End of Chapter 2 — Mixed Exercise

1. >
2. 10,49,55
3. 17
4. <
5. 35,41,52
6. 57
7. >
8. 21,37,73
9. 22
10. >

CHAPTER 3 — Addition

Add 1-digit numbers

1. 11
2. 10
3. 7
4. 6
5. 17
6. 8
7. 14
8. 12
9. 9
10. 13

Add 2-digit (no regrouping)

1. 61
2. 52
3. 48
4. 71
5. 33
6. 65
7. 54
8. 60
9. 38
10. 39



**Add 2-digit (with regrouping)**

1. 73
2. 51
3. 75
4. 57
5. 39
6. 81
7. 44
8. 61
9. 49
10. 74

Add multiples of 10

1. 70
2. 110
3. 100
4. 50
5. 60
6. 110
7. 120
8. 40
9. 120
10. 110

Word problems: addition

1. 55
2. 54
3. 50
4. 35
5. 57
6. 38
7. 49
8. 47
9. 64
10. 51

End of Chapter 3 — Mixed Exercise

1. 11
2. 52
3. 75
4. 50
5. 57
6. 8
7. 54
8. 61
9. 120
10. 51





CHAPTER 4 — Subtraction

Subtract 1-digit numbers

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

Subtract 2-digit (no regrouping)

1. 59
2. 12
3. 17
4. 35
5. 36
6. 26
7. 24
8. 70
9. 39
10. 81

Subtract from multiples of 10

1. 4
2. 54
3. 37
4. 3
5. 19
6. 52
7. 58
8. 22
9. 9
10. 21

Word problems: subtraction

1. 24
2. 13
3. 10
4. 30
5. 13
6. 15
7. 7
8. 19
9. 11
10. 15



**End of Chapter 4 — Mixed Exercise**

1. 0
2. 12
3. 37
4. 30
5. 4
6. 26
7. 58
8. 19
9. 0
10. 81

CHAPTER 5 — Multiplication**Multiply by 2**

1. 12
2. 10
3. 18
4. 8
5. 16
6. 20
7. 14
8. 4
9. 6
10. 2

Multiply by 5

1. 15
2. 25
3. 35
4. 5
5. 10
6. 45
7. 30
8. 20
9. 50
10. 40

Multiply by 10

1. 90
2. 50
3. 70
4. 30
5. 40
6. 100
7. 10
8. 60
9. 20
10. 80



**Repeated addition**

1. 3
2. 3
3. 3
4. 3

End of Chapter 5 — Mixed Exercise

1. 12
2. 25
3. 70
4. 3
5. 16
6. 45
7. 10
8. 3
9. 6
10. 40

CHAPTER 6 — Division

Sharing into equal groups

1. 2
2. 5
3. 3
4. 5
5. 4
6. 3
7. 4
8. 2

Divide by 2

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

Divide by 5

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



**Divide by 10**

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

End of Chapter 6 — Mixed Exercise

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

CHAPTER 7 — Fractions

Halves

1. 2
2. 4
3. 5
4. 3

Quarters

1. 4
2. 3
3. 2
4. 5
5. 1

Thirds

1. 4
2. 5
3. 2
4. 3
5. 1

Identify a fraction

1. $\frac{1}{2}$
2. $\frac{2}{5}$
3. $\frac{1}{4}$
4. $\frac{3}{5}$
5. $\frac{1}{5}$
6. $\frac{3}{4}$
7. $\frac{1}{3}$
8. $\frac{2}{4}$





9. $\frac{2}{3}$

End of Chapter 7 — Mixed Exercise

1. 2
2. 3
3. 2
4. $\frac{3}{5}$
5. 3
6. 1
7. 1
8. $\frac{2}{4}$
9. 4
10. 4

CHAPTER 8 — Money

Coin combinations

1. 10
2. 11
3. 12
4. 13
5. 14
6. 8
7. 10
8. 11
9. 9
10. 9

Making change

1. 4
2. 2
3. 5
4. 6
5. 7
6. 3
7. 1

Word problems: money

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

End of Chapter 8 — Mixed Exercise

1. 10
2. 2
3. 6
4. 13
5. 7





6. 3
7. 10
8. 1
9. 2
10. 9

CHAPTER 9 — Time

Read clocks: half past

1. 2:30
2. 10:30
3. 6:30
4. 8:30
5. 11:30
6. 7:30
7. 4:30
8. 12:30
9. 3:30
10. 9:30

Read clocks: quarter past/to

1. 1:15
2. 12:15
3. 5:15
4. 3:15
5. 11:15
6. 6:15
7. 2:15
8. 7:15
9. 8:15
10. 4:15

Days in a week

1. 7

Months in a year

1. 12

End of Chapter 9 — Mixed Exercise

1. 2:30
2. 12:15
3. 7
4. 12
5. 11:30
6. 6:15
7. 7
8. 12
9. 3:30
10. 4:15





CHAPTER 10 — Measurement

Measure in cm

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

Convert m to cm

1. 400
2. 100
3. 500
4. 300
5. 200

Mass: g and kg

1. 1000

Capacity: ml and l

1. 1000

End of Chapter 10 — Mixed Exercise

1. 3
2. 100
3. 1000
4. 1000
5. 5
6. 200
7. 1000
8. 1000
9. 3
10. 400

CHAPTER 11 — Geometry

Identify 2D shapes

1. square
2. pentagon
3. hexagon
4. triangle

Identify 3D shapes

1. sphere
2. cube
3. cylinder





Symmetry

1. yes

End of Chapter 11 — Mixed Exercise

1. square
2. cube
3. yes
4. triangle
5. cylinder
6. yes
7. pentagon
8. sphere
9. yes
10. hexagon

CHAPTER 12 — Data and Graphs

Read tally charts

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

Read pictographs

1. 6
2. 2
3. 4
4. 3
5. 5

Most and least

1. oranges

End of Chapter 12 — Mixed Exercise

1. 4
2. 2
3. oranges
4. 9
5. 5
6. oranges
7. 6
8. 6
9. oranges
10. 8





CHAPTER 13 — Patterns

Number patterns

1. 15
2. 15
3. 10
4. 18
5. 23
6. 12
7. 22
8. 15
9. 9
10. 5

Shape patterns

1. ▲

End of Chapter 13 — Mixed Exercise

1. 15
2. ▲
3. 10
4. ▲
5. 23
6. ▲
7. 22
8. ▲
9. 9
10. ▲





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