

P6 Maths Cheat Sheet

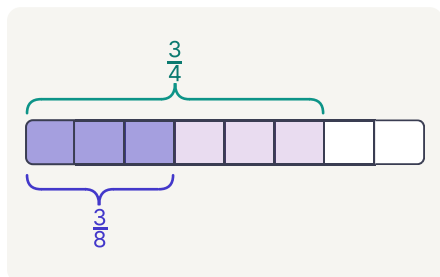
Every formula and key fact for Primary 6, from the latest (2026) MOE syllabus

INSIDE

- Number & Algebra p. 1
- Measurement & Geometry p. 2
- Statistics p. 4
- Problem sums · On the paper p. 4

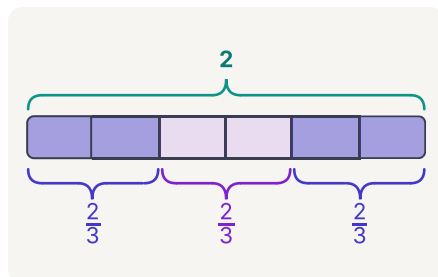
NUMBER & ALGEBRA

Fractions Term 1



Fraction ÷ whole number: share it out

$$\frac{3}{4} \div 2 = \frac{3}{8}$$



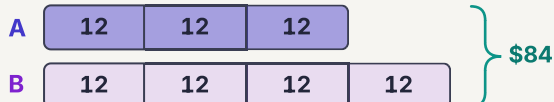
Whole ÷ fraction: how many fit?

$$2 \div \frac{2}{3} = 3$$

$$\frac{3}{4} \div \frac{3}{8} = \frac{3}{4} \times \frac{8}{3} = 2$$

÷ a fraction: Keep, Change, Flip

Ratio Term 1



Share \$84 in the ratio 3 : 4. Find 1 unit first.

$$1 \text{ unit} \rightarrow 84 \div 7 = \$12$$

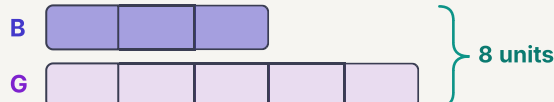
$$A \rightarrow 3 \times 12 = \$36$$

$$B \rightarrow 4 \times 12 = \$48$$

Simplest form: ÷ every term by the same number

$$12 : 18 = 12 \div 6 : 18 \div 6 = 2 : 3$$

$$12 : 18 : 24 = 2 : 3 : 4$$



Boys : girls = 3 : 5

$$\text{boys as a fraction of girls} \rightarrow 3 \div 5 = \frac{3}{5}$$

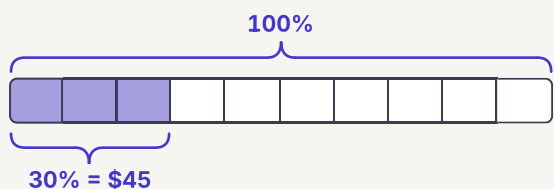
$$\text{boys as a fraction of all} \rightarrow 3 \div 8 = \frac{3}{8}$$

Equivalent ratios: × or ÷ every term by the same number

$$2 : 5 = 2 \times 3 : 5 \times 3 = 6 : 15$$

$$3 : 4 = ? : 20 \rightarrow 3 \times (20 \div 4) = 15$$

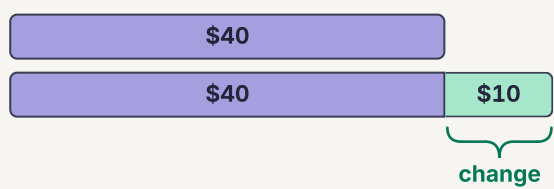
Percentage Term 1



30% is \$45: find 10%, then 100%

$$10\% \rightarrow 45 \div 3 = \$15$$

$$100\% \rightarrow 15 \times 10 = \$150$$



Percentage change

$$\text{change} \div \text{original} \times 100\%$$

EXAMPLE

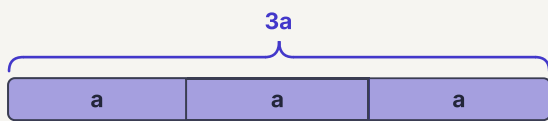
$$\$40 \text{ to } \$50 \rightarrow 10 \div 40 \times 100\% = 25\%$$

$$\$50 \text{ to } \$40 \rightarrow 10 \div 50 \times 100\% = 20\%$$



NUMBER & ALGEBRA

Algebra Term 2

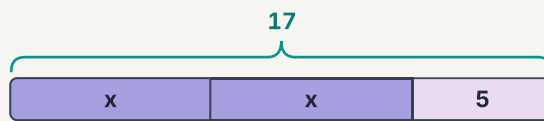


A letter stands for an unknown number

$$3a = 3 \times a, \quad \frac{a}{3} = a \div 3$$

Add or take away like terms only

$$5a + 2 - 2a + 4 = 3a + 6$$



Solve $2x + 5 = 17$: undo each step, then check

$$2x \rightarrow 17 - 5 = 12$$

$$x \rightarrow 12 \div 2 = 6$$

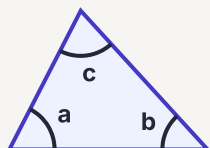
$$\text{check} \rightarrow 2 \times 6 + 5 = 17$$

Substitute $a = 4$ into $3a + 6$

$$3 \times 4 + 6 = 18$$

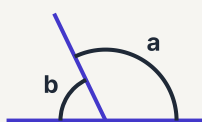
MEASUREMENT & GEOMETRY

Angles in Geometrical Figures Term 1 · revision



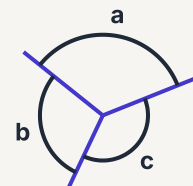
Angles in a triangle

$$a + b + c = 180^\circ$$



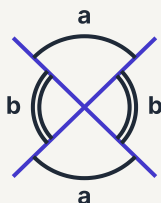
Angles on a straight line

$$a + b = 180^\circ$$

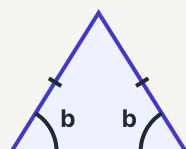


Angles at a point

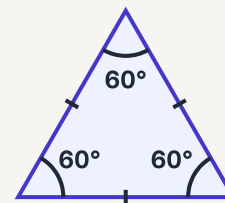
$$a + b + c = 360^\circ$$



Vertically opposite angles are equal

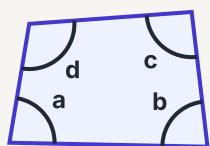


Isosceles triangle: 2 equal sides, 2 equal base angles



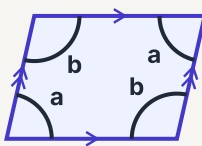
Equilateral triangle: every angle is 60°

$$180 \div 3 = 60^\circ$$



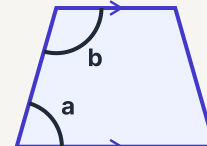
Angles in a quadrilateral

$$a + b + c + d = 360^\circ$$



Parallelogram, rhombus: opposite angles are equal

$$a + b = 180^\circ$$

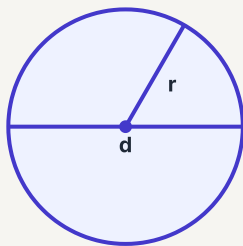


Trapezium: the angles between parallel sides

$$a + b = 180^\circ$$

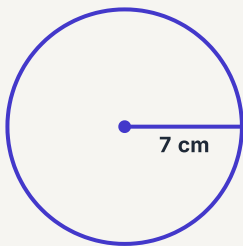


MEASUREMENT & GEOMETRY

Circles Term 2 $\pi = \frac{22}{7}$


Diameter and radius

$$d = 2r$$

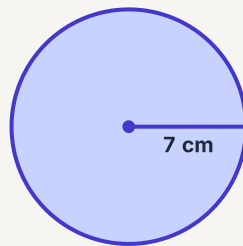


Circumference: the distance around

$$C = \pi d = 2\pi r$$

EXAMPLE

$$2 \times \pi \times 7 = 44 \text{ cm}$$

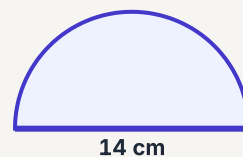


Area of a circle

$$A = \pi r^2$$

EXAMPLE

$$\pi \times 7 \times 7 = 154 \text{ cm}^2$$

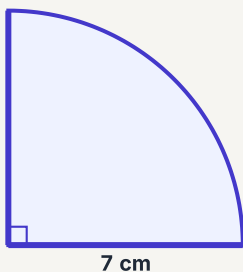


Half circle: perimeter

$$\frac{1}{2}\pi d + d$$

EXAMPLE

$$\frac{1}{2} \times \pi \times 14 + 14 = 36 \text{ cm}$$

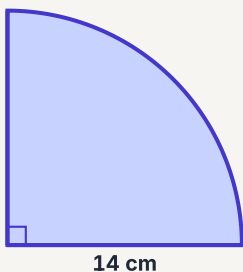


Quarter circle: perimeter

$$\frac{1}{2}\pi r + 2r$$

EXAMPLE

$$\frac{1}{2} \times \pi \times 7 + 2 \times 7 = 25 \text{ cm}$$

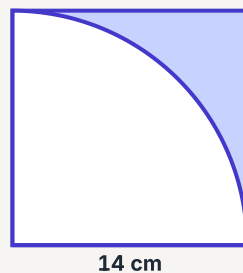


Half or quarter circle: area

$$\frac{1}{2}\pi r^2 \text{ or } \frac{1}{4}\pi r^2$$

EXAMPLE

$$\frac{1}{4} \times \pi \times 14^2 = 154 \text{ cm}^2$$



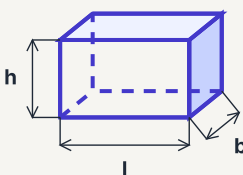
Composite figures

Area: add or take away.
Perimeter: the outside edge only.

$$\text{square} - \text{quarter circle} \\ \rightarrow 14 \times 14 - 154 = 42 \text{ cm}^2$$

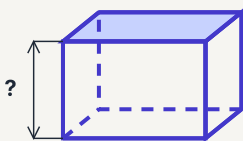
Volume of Cube and Cuboid

Term 2



Volume of a cuboid

$$V = l \times b \times h$$

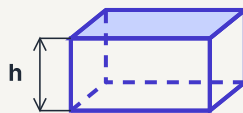
a cube: edge $\times$ edge $\times$ edge


Height of a cuboid

$$h = V \div \text{base area}$$

EXAMPLE

$$360 \text{ cm}^3, \text{ base } 40 \text{ cm}^2 \\ \rightarrow 360 \div 40 = 9 \text{ cm}$$

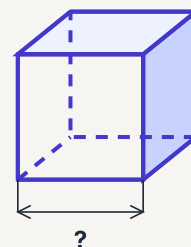


Area of a face

$$A = V \div h$$

EXAMPLE

$$480 \text{ cm}^3, h = 6 \text{ cm} \\ \rightarrow 480 \div 6 = 80 \text{ cm}^2$$



Edge of a cube

$$\text{edge} = \sqrt[3]{V}$$

EXAMPLE

$$343 \text{ cm}^3 \rightarrow \sqrt[3]{343} = 7 \text{ cm}$$

Square root and cube root

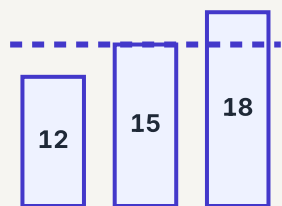
 $\sqrt{\quad}$ undoes squaring; $\sqrt[3]{\quad}$ undoes cubing

$$\sqrt{64} = 8 \quad \sqrt[3]{64} = 4$$



STATISTICS

Average Term 3

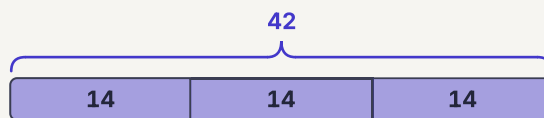


Average

total $\div$ number

EXAMPLE

$$(12 + 15 + 18) \div 3 = 15$$



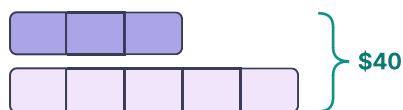
Total from the average

average $\times$ number

EXAMPLE

3 numbers, average 14 $\rightarrow 14 \times 3 = 42$

PROBLEM SUMS: HOW TO SPOT EACH METHOD

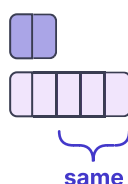


Units and parts method

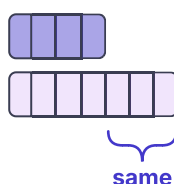
"Find 1 unit first"

Turn the story into equal units, find 1 unit, then scale up.

BEFORE



AFTER

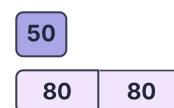


Constant total and constant difference

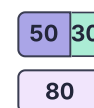
"What did not change?"

Find what stays the same: the total, the difference or one part.

AT FIRST



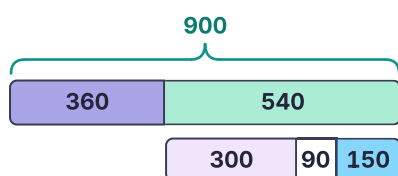
IN THE END



Equal stage method

"They end up equal"

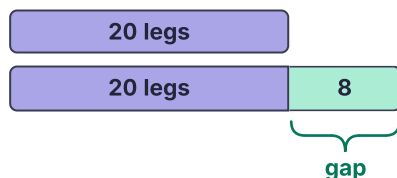
Make the equal amounts the same number of units first.



Branching method

"Of the remainder"

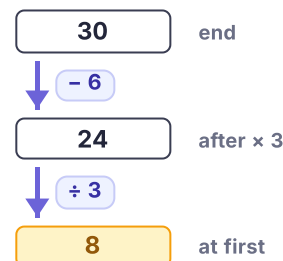
Take each fraction of what is LEFT, not of the whole.



Assumption method

"Two kinds, two totals"

Assume all are one kind, then swap: the gap $\div$ the difference per swap.



Working backwards

"Start from the end"

Start from the end and undo each step in reverse.

On the paper

- No formula list is given in the exam: know these by heart.
- Paper 1: no calculator.
- Paper 2: calculator allowed.
- Answer in the unit the question gives.
- Show your working: a correct method can earn a mark even when the answer is wrong.
- Fractions and ratios in their simplest form.
- Use the π the question gives: 3.14 or $\frac{22}{7}$.

Units

- 1 km = 1000 m
- 1 m = 100 cm
- 1 kg = 1000 g
- 1 l = 1000 ml = 1000 cm³
- 1 h = 60 min

