

# P5–P6 Fractions, Ratio & Percentage Worksheet

30 PSLE-level questions across three topics, with a fully worked answer key. Primary 5–6.

Fractions, ratio and percentage are really **three views of the same idea** — comparing a part to a whole. Master the link and these become some of the most reliable marks at PSLE. Work through each section, use the worked example as your model, then self-mark with the answer key at the end. Show your working on word problems — that is where method marks live.

## SECTION A · QUESTIONS 1–10

### Fractions

**Worked example:** What is  $\frac{2}{3}$  of 18? →  $18 \div 3 = 6$ , then  $6 \times 2 = 12$ . (Divide by the bottom number, multiply by the top.)

- $\frac{3}{8} + \frac{1}{4} =$  .....
- $\frac{5}{6} - \frac{1}{3} =$  .....
- $\frac{2}{3} \times 9 =$  .....
- $\frac{3}{4} \div \frac{1}{8} =$  .....
- $\frac{7}{10} - \frac{2}{5} =$  .....
- Write  $\frac{18}{24}$  in its simplest form. ....
- There are 35 pupils in a class.  $\frac{2}{5}$  of them wear glasses. How many pupils wear glasses? .....
- A ribbon is  $\frac{3}{4}$  m long. Mei cuts off  $\frac{1}{2}$  m to wrap a gift. What length of ribbon is left? .....
- A book has 240 pages. Ravi has read  $\frac{5}{8}$  of the book. How many pages has he *not* read yet? .....
- A water tank is  $\frac{4}{5}$  full. The water in it measures 60 litres. How many litres does the tank hold when completely full?  
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## SECTION B · QUESTIONS 11–20

### Ratio

**Worked example:** Share \$60 between Ali and Ben in the ratio 2:3. →  $2 + 3 = 5$  units.  $\$60 \div 5 = \$12$  per unit. Ali gets  $2 \times \$12 = \$24$ , Ben gets  $3 \times \$12 = \$36$ .

- Express the ratio 12 : 18 in its simplest form. ....
- Find the missing number:  $4 : 6 = 10 :$  .....
- \$60 is shared among three children in the ratio 2 : 3 : 5. How much does each child receive? .....
- The ratio of red beads to blue beads is 5 : 3. There are 40 red beads. How many blue beads are there? .....
- A box has 50 marbles, green and yellow, in the ratio 3 : 7. How many marbles of each colour are there? .....
- In a choir the ratio of boys to girls is 1 : 9. There are 9 boys. How many girls are there? .....
- \$80 is divided between Siti and Tom in the ratio 3 : 5. How much does each person get? .....
- The ratio of A : B is 2 : 5. If B = 35, find A. ....
- To make mortar, cement and sand are mixed in the ratio 1 : 4. A builder uses 20 kg of cement. What is the total mass of the mixture?  
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- Jia has marbles and stickers in the ratio 5 : 4. She has 6 more marbles than stickers. How many items does she have altogether?  
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**SECTION C · QUESTIONS 21–30****Percentage**

**Worked example:** Find 20% of \$90.  $\rightarrow 20\% = 20/100$ . So  $\$90 \div 100 \times 20 = \$0.90 \times 20 = \$18$ .

- Find 25% of 80. ....
- Express 40 out of 50 as a percentage. ....
- Find 15% of 200. ....
- Write 0.6 as a percentage. ....
- Increase 120 by 10%. ....
- A bag costs \$250. In a sale it is given a 20% discount. How much does it cost after the discount? .....
- In a quiz of 40 questions, Lim answered 30 correctly. What percentage did he get correct? .....
- May saved \$45, which is 30% of her monthly allowance. What is her full monthly allowance? .....
- A school has 800 pupils. 55% of them are girls. How many boys are there? .....
- A television is priced at \$400 before GST. With 7% GST added, what is the total amount a customer pays? .....

**Answer Key — all 30 verified****SECTION A · FRACTIONS**

- $5/8$  ( $3/8 + 2/8$ )
- $1/2$  ( $5/6 - 2/6 = 3/6$ )
- 6 ( $2 \times 9 = 18, 18 \div 3$ )
- 6 ( $3/4 \times 8/1 = 24/4$ )
- $3/10$  ( $7/10 - 4/10$ )
- $3/4$  (divide both by 6)
- 14 pupils ( $35 \div 5 = 7, 7 \times 2$ )
- $1/4$  m ( $3/4 - 2/4$ )
- 90 pages (read  $5/8 \times 240 = 150$ ;  $240 - 150$ )
- 75 litres (4 units = 60, 1 unit = 15, 5 units = 75)

**SECTION B · RATIO**

- 2 : 3 (divide both by 6)
- 15 ( $4 : 6 = 10 : 15$ , both  $\times 2.5$ )
- \$12, \$18, \$30 (10 units,  $\$60 \div 10 = \$6$ ;  $\times 2, \times 3, \times 5$ )
- 24 blue beads (5 units = 40, 1 unit = 8,  $3 \times 8$ )
- 15 green and 35 yellow (10 units = 50, 1 unit = 5)
- 81 girls (1 unit = 9,  $9 \times 9$ )
- Siti \$30, Tom \$50 (8 units,  $\$80 \div 8 = \$10$ ;  $\times 3, \times 5$ )
- 14 (5 units = 35, 1 unit = 7,  $2 \times 7$ )
- 100 kg (cement 1 unit = 20 kg, sand  $4 \times 20 = 80$ ; total 100)
- 54 items (difference 1 unit = 6;  $5 + 4 = 9$  units  $\times 6$ )

**SECTION C · PERCENTAGE**

- 20 ( $80 \div 100 \times 25$ )
- 80% ( $40 \div 50 \times 100$ )
- 30 ( $200 \div 100 \times 15$ )
- 60% ( $0.6 \times 100$ )
- 132 (10% of 120 = 12;  $120 + 12$ )
- \$200 (20% of \$250 = \$50;  $\$250 - \$50$ )
- 75% ( $30 \div 40 \times 100$ )
- \$150 (30% = \$45, 1% = \$1.50, 100% = \$150)
- 360 boys (girls 55%  $\rightarrow$  boys 45% of 800 = 360)
- \$428 (7% of \$400 = \$28;  $\$400 + \$28$ )