

**YEAR 8**

Ratio and Proportion

Three sections. Write ratios in the form 3 : 5, simplified unless the question says otherwise.

Name: _____

Date: _____

Score: _____

A. Simplifying

Divide both sides by the same number, as far as it will go.

① Simplify 6 : 9

② Simplify 20 : 30

③ Simplify 14 : 21

④ Simplify 45 : 27

⑤ Simplify 18 : 24

⑥ Simplify 100 : 250

⑦ Simplify 35 : 15

⑧ Simplify 8 : 32

B. Sharing

Add the parts, divide the total by that, then multiply by each part.

① Share 40 in the ratio 3 : 5. Give both shares.

2 Share 60 in the ratio 1 : 3. Give both shares.

3 Share 84 in the ratio 2 : 5. Give both shares.

4 Share 55 in the ratio 6 : 5. Give both shares.

5 Share 120 in the ratio 7 : 5. Give both shares.

6 Share 90 in the ratio 4 : 5. Give both shares.

7 £72 is shared in the ratio 1 : 2 : 3. Give all three shares.

8 A recipe uses flour and sugar in the ratio 5 : 2. 350g of flour is used. How much sugar?

C. Proportion

Find what one costs or weighs first, then scale up.

1 6 pens cost £4.20. How much do 9 pens cost?

2 A car travels 150 miles on 5 gallons. How far on 8 gallons?

3 4 books weigh 1200g. How much do 7 books weigh?

4 3 workers build a wall in 8 days. How long would 6 workers take?

5 A map scale is 1 : 50000. A road is 4cm on the map. How long is it really, in metres?

6 Which is better value: 900g for £2.70 or 1200g for £3.96? Show the price per 100g.