



EP.M92 Speed Drills: Ratio, Proportion and Scaling Set 2

GL ASSESSMENT EP.M92 · Calculators not allowed · about 20 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

A timed speed-drill pack for building fast, accurate ratio and proportion skills - the fluency with simplifying ratios, sharing amounts fairly and scaling recipes and prices that keeps working quick enough for the real GL Assessment 11+ maths paper. This is the second set in the series, with a fresh set of numbers and contexts throughout. Complete each block against its own 5-minute target without a calculator, writing only the final answer in the answer grid provided; no working space is given or needed. There are 4 blocks of 20 one-mark, answer-only questions: Block 1, simplifying ratios and finding equivalent ratios; Block 2, sharing an amount in a given ratio; Block 3, the unitary method and scaling recipes; Block 4, a mixed speed round including quick best-buy comparisons. Each block carries its own Target: 5 minutes heading; time yourself (or ask an adult to time you) and note how close you get to the target on each block.

- 1 Block 1: Simplifying ratios and equivalent ratios - Target: 5 minutes. Simplify the ratio 6 : 10 to its simplest form.

(Total for Question 1 is 1 mark)

- 2 Simplify the ratio 9 : 3 to its simplest form.

(Total for Question 2 is 1 mark)

- 3 Simplify the ratio 8 : 12 to its simplest form.

(Total for Question 3 is 1 mark)

- 4 Simplify the ratio 14 : 21 to its simplest form.

(Total for Question 4 is 1 mark)

5 Simplify the ratio 10 : 25 to its simplest form.

(Total for Question 5 is 1 mark)

6 Simplify the ratio 18 : 27 to its simplest form.

(Total for Question 6 is 1 mark)

7 Simplify the ratio 24 : 36 to its simplest form.

(Total for Question 7 is 1 mark)

8 Simplify the ratio 15 : 35 to its simplest form.

(Total for Question 8 is 1 mark)

9 Simplify the ratio 33 : 55 to its simplest form.

(Total for Question 9 is 1 mark)

10 Simplify the ratio 28 : 42 to its simplest form.

(Total for Question 10 is 1 mark)

11 Simplify the ratio 16 : 40 to its simplest form.

(Total for Question 11 is 1 mark)

12 Complete the missing number: $5 : 6 = 30 : \underline{\hspace{1cm}}$

(Total for Question 12 is 1 mark)

13 Complete the missing number: $3 : 7 = \underline{\hspace{1cm}} : 49$

(Total for Question 13 is 1 mark)

14 Complete the missing number: $8 : 9 = 40 : \underline{\hspace{1cm}}$

(Total for Question 14 is 1 mark)

15 Complete the missing number: $2 : 9 = \underline{\hspace{1cm}} : 54$

(Total for Question 15 is 1 mark)

16 Complete the missing number: $7 : 12 = 63 : \underline{\hspace{1cm}}$

(Total for Question 16 is 1 mark)

17 A recipe uses butter and flour in the ratio $18 : 24$. Simplify this ratio.

(Total for Question 17 is 1 mark)

18 Simplify the ratio $4.2 : 5.6$ to its simplest whole-number form.

(Total for Question 18 is 1 mark)

19 Simplify the ratio $36 : 54 : 90$ to its simplest form.

(Total for Question 19 is 1 mark)

- 20** A length of 3.2 m is compared with a length of 80 cm. Write this as a ratio in its simplest whole-number form.

(Total for Question 20 is 1 mark)

- 21** Block 2: Sharing in a ratio - Target: 5 minutes. Share 28 conkers between Priya and Sam in the ratio 1 : 3. Find how many conkers Priya gets.

(Total for Question 21 is 1 mark)

- 22** Share £18 between Noah and Ella in the ratio 2 : 7. Find how much Noah gets.

(Total for Question 22 is 1 mark)

- 23** Share 21 badges between Ken and Mia in the ratio 1 : 2. Find how many badges Mia gets.

(Total for Question 23 is 1 mark)

- 24** Share £60 between Jamal and Freya in the ratio 3 : 7. Find how much Freya gets.

(Total for Question 24 is 1 mark)

- 25** Share 72 counters between Wesley and Dina in the ratio 5 : 4. Find how many counters Wesley gets.

(Total for Question 25 is 1 mark)

- 26** 120 g of icing sugar is shared between two cakes in the ratio 3 : 5. Find the mass of the larger share.

(Total for Question 26 is 1 mark)

27 Share £90 between Sian, Bilal and Grace in the ratio 2 : 3 : 4. Find how much Bilal gets.

(Total for Question 27 is 1 mark)

28 Share 110 marbles between three friends in the ratio 2 : 3 : 6. Find the size of the largest share.

(Total for Question 28 is 1 mark)

29 Two numbers are in the ratio 2 : 5 and their sum is 84. Find the smaller number.

(Total for Question 29 is 1 mark)

30 Share £91 between Rhys and Anya in the ratio 3 : 10. Find how much more Anya gets than Rhys.

(Total for Question 30 is 1 mark)

31 A bag of 96 sweets is shared between Owen and Lily in the ratio 7 : 5. Find how many sweets Owen gets.

(Total for Question 31 is 1 mark)

32 189 counters are shared between three players in the ratio 6 : 7 : 8. Find the size of the middle share.

(Total for Question 32 is 1 mark)

33 A fruit drink of 4.5 litres is made from squash and water in the ratio 1 : 8. Find how many litres of water it contains.

(Total for Question 33 is 1 mark)

- 34** 91 kg of flour is shared between two bakeries in the ratio 9 : 4. Find how much the smaller bakery receives.

(Total for Question 34 is 1 mark)

- 35** A journey of 182 km is split into two legs in the ratio 3 : 10. Find the length of the shorter leg.

(Total for Question 35 is 1 mark)

- 36** Share £70 between three charities in the ratio 1 : 2 : 4. Find how much the charity with the smallest share receives.

(Total for Question 36 is 1 mark)

- 37** The angles of a triangle are in the ratio 3 : 4 : 5. Find the size of the largest angle.

(Total for Question 37 is 1 mark)

- 38** Two amounts are shared in the ratio 4 : 9. The smaller amount is £72. Find the total amount shared.

(Total for Question 38 is 1 mark)

- 39** A sum of money is shared between Farah and Ola in the ratio 3 : 8. Ola receives £45 more than Farah. Find Farah's share.

(Total for Question 39 is 1 mark)

- 40** Three sisters share a bonus in the ratio 2 : 4 : 7. The eldest receives £45 more than the youngest. Find the total bonus shared.

(Total for Question 40 is 1 mark)

41 Block 3: Unitary method and recipe scaling - Target: 5 minutes. 4 pens cost £8. Find the cost of 1 pen.

(Total for Question 41 is 1 mark)

42 A recipe for 5 people needs 250 g of rice. Find how many grams of rice are needed for 1 person.

(Total for Question 42 is 1 mark)

43 6 identical books cost £24. Find the cost of 2 books.

(Total for Question 43 is 1 mark)

44 A recipe for 4 people uses 200 g of butter. Find how much butter is needed for 10 people.

(Total for Question 44 is 1 mark)

45 9 identical tickets cost £72. Find the cost of 4 tickets.

(Total for Question 45 is 1 mark)

46 A recipe for 5 people needs 400 ml of milk. Find how much milk is needed for 8 people.

(Total for Question 46 is 1 mark)

47 10 metres of fabric cost £60. Find the cost of 7 metres.

(Total for Question 47 is 1 mark)

48 A car travels 84 km using 6 litres of fuel. Find how far it can travel on 9 litres.

(Total for Question 48 is 1 mark)

49 A recipe for 4 people uses 200 g of pasta. Find how much pasta is needed for 11 people.

(Total for Question 49 is 1 mark)

50 A job needs 60 worker-hours shared equally between 5 workers. Find how many hours each worker puts in.

(Total for Question 50 is 1 mark)

51 A recipe for 6 people uses 3 eggs. Find how many eggs are needed for 18 people.

(Total for Question 51 is 1 mark)

52 6 identical calculators cost £90. Find the cost of 8 calculators.

(Total for Question 52 is 1 mark)

53 A recipe for 10 people uses 500 g of sugar. Find how much sugar is needed for 4 people.

(Total for Question 53 is 1 mark)

54 A printer prints 63 pages in 7 minutes. Find how many pages it prints in 4 minutes.

(Total for Question 54 is 1 mark)

55 A recipe for 8 people uses 800 ml of stock. Find how much stock is needed for 5 people.

(Total for Question 55 is 1 mark)

56 5 identical chairs cost £85. Find the cost of 8 chairs.

(Total for Question 56 is 1 mark)

57 A recipe for 6 people uses 1.8 kg of potatoes. Find how many kilograms are needed for 4 people.

(Total for Question 57 is 1 mark)

58 A recipe for 4 people uses 280 g of flour. Zain wants to make enough for 9 people. Find how many grams of flour he needs.

(Total for Question 58 is 1 mark)

59 12 identical exercise books cost £30. Find the cost of 20 such books.

(Total for Question 59 is 1 mark)

60 A recipe serves 5 people and uses 400 g of chocolate. Kofi has 320 g of chocolate. Using the same ratio, find how many people he can serve exactly.

(Total for Question 60 is 1 mark)

61 Block 4: Mixed speed round including quick best-buy comparisons - Target: 5 minutes. A 5-pack of yoghurts costs £3. Find the cost per yoghurt.

(Total for Question 61 is 1 mark)

62 Simplify the ratio 20 : 45 to its simplest form.

(Total for Question 62 is 1 mark)

63 3 tins of beans cost £1.80. Find the cost of 1 tin.

(Total for Question 63 is 1 mark)

64 A jar of honey costs £3.60 for 400 g. Find the price per 100 g.

(Total for Question 64 is 1 mark)

65 600 g of rice costs £1.80, and 900 g of rice costs £2.43. State which pack is better value.

(Total for Question 65 is 1 mark)

66 Share £105 between Idris and Maya in the ratio 4 : 3. Find how much Maya gets.

(Total for Question 66 is 1 mark)

67 A recipe for 5 people needs 300 g of oats. Find how much is needed for 8 people.

(Total for Question 67 is 1 mark)

68 Simplify the ratio 35 : 60 to its simplest form.

(Total for Question 68 is 1 mark)

- 69** A 5-pack of fruit bars costs £3.00. A single fruit bar costs 65p. State which is better value: the 5-pack, or 5 single bars.

(Total for Question 69 is 1 mark)

- 70** Complete the missing number: $8 : 11 = 24 : \underline{\hspace{1cm}}$

(Total for Question 70 is 1 mark)

- 71** A car uses 4 litres of petrol to travel 52 km. Find how far it can travel on 9 litres.

(Total for Question 71 is 1 mark)

- 72** 105 sweets are shared between three friends in the ratio $1 : 2 : 4$. Find how many sweets the friend with the smallest share gets.

(Total for Question 72 is 1 mark)

- 73** A 3 litre bottle of squash costs £4.50. A 4 litre bottle costs £5.60. State which bottle is better value per litre.

(Total for Question 73 is 1 mark)

- 74** Simplify the ratio $27 : 63$ to its simplest form.

(Total for Question 74 is 1 mark)

- 75** 7 identical erasers cost £2.10. Find the cost of 5 erasers.

(Total for Question 75 is 1 mark)

76 Share £170 between Dev and Farida in the ratio 6 : 11. Find how much Dev gets.

(Total for Question 76 is 1 mark)

77 A recipe for 4 people uses 3 eggs. Find how many eggs are needed for 20 people.

(Total for Question 77 is 1 mark)

78 300 g of cheese costs £2.40, and a different pack of 0.75 kg of the same cheese costs £5.40. State which pack is better value per 100 g.

(Total for Question 78 is 1 mark)

79 Three amounts are shared in the ratio 3 : 4 : 9. The smallest amount is 24. Find the largest amount.

(Total for Question 79 is 1 mark)

80 A recipe for 6 people uses 480 g of flour. Amara wants to make the recipe for 9 people. Find how many grams of flour she needs.

(Total for Question 80 is 1 mark)

Mark scheme · EP.M92 Speed Drills: Ratio, Proportion and Scaling Set 2

Question 1

- **B1** 3 : 5 cao
- **Answer:** 3 : 5

Question 2

- **B1** 3 : 1 cao
- **Answer:** 3 : 1

Question 3

- **B1** 2 : 3 cao
- **Answer:** 2 : 3

Question 4

- **B1** 2 : 3 cao
- **Answer:** 2 : 3

Question 5

- **B1** 2 : 5 cao
- **Answer:** 2 : 5

Question 6

- **B1** 2 : 3 cao
- **Answer:** 2 : 3

Question 7

- **B1** 2 : 3 cao
- **Answer:** 2 : 3

Question 8

- **B1** 3 : 7 cao
- **Answer:** 3 : 7

Question 9

- **B1** 3 : 5 cao
- **Answer:** 3 : 5

Question 10

- **B1** 2 : 3 cao
- **Answer:** 2 : 3

Question 11

- **B1** 2 : 5 cao
- **Answer:** 2 : 5

Question 12

- **B1** 36 cao
- **Answer:** 36

Question 13

- **B1** 21 cao
- **Answer:** 21

Question 14

- **B1** 45 cao
- **Answer:** 45

Question 15

- **B1** 12 cao
- **Answer:** 12

Question 16

- **B1** 108 cao
- **Answer:** 108

Question 17

- **B1** 3 : 4 cao
- **Answer:** 3 : 4

Question 18

- **B1** 3 : 4 cao
- **Answer:** 3 : 4

Question 19

- **B1** 2 : 3 : 5 cao
- **Answer:** 2 : 3 : 5

Question 20

- **B1** 4 : 1 cao
- **Answer:** 4 : 1

Question 21

- **B1** 7 cao
- **Answer:** 7

Question 22

- **B1** £4 cao
- **Answer:** £4

Question 23

- **B1** 14 cao
- **Answer:** 14

Question 24

- **B1** £42 cao
- **Answer:** £42

Question 25

- **B1** 40 cao
- **Answer:** 40

Question 26

- **B1** 75 g cao
- **Answer:** 75 g

Question 27

- **B1** £30 cao
- **Answer:** £30

Question 28

- **B1** 60 cao
- **Answer: 60**

Question 29

- **B1** 24 cao
- **Answer: 24**

Question 30

- **B1** £49 cao
- **Answer: £49**

Question 31

- **B1** 56 cao
- **Answer: 56**

Question 32

- **B1** 63 cao
- **Answer: 63**

Question 33

- **B1** 4 litres cao
- **Answer: 4 litres**

Question 34

- **B1** 28 kg cao
- **Answer: 28 kg**

Question 35

- **B1** 42 km cao
- **Answer: 42 km**

Question 36

- **B1** £10 cao
- **Answer: £10**

Question 37

- **B1** 75 degrees cao
- **Answer: 75 degrees**

Question 38

- **B1** £234 cao
- **Answer: £234**

Question 39

- **B1** £27 cao
- **Answer: £27**

Question 40

- **B1** £117 cao
- **Answer: £117**

Question 41

- **B1** £2 cao
- **Answer: £2**

Question 42

- **B1** 50 g cao
- **Answer:** 50 g

Question 43

- **B1** £8 cao
- **Answer:** £8

Question 44

- **B1** 500 g cao
- **Answer:** 500 g

Question 45

- **B1** £32 cao
- **Answer:** £32

Question 46

- **B1** 640 ml cao
- **Answer:** 640 ml

Question 47

- **B1** £42 cao
- **Answer:** £42

Question 48

- **B1** 126 km cao
- **Answer:** 126 km

Question 49

- **B1** 550 g cao
- **Answer:** 550 g

Question 50

- **B1** 12 hours cao
- **Answer:** 12 hours

Question 51

- **B1** 9 eggs cao
- **Answer:** 9 eggs

Question 52

- **B1** £120 cao
- **Answer:** £120

Question 53

- **B1** 200 g cao
- **Answer:** 200 g

Question 54

- **B1** 36 pages cao
- **Answer:** 36 pages

Question 55

- **B1** 500 ml cao
- **Answer:** 500 ml

Question 56

- **B1** £136 cao
- **Answer: £136**

Question 57

- **B1** 1.2 kg cao
- **Answer: 1.2 kg**

Question 58

- **B1** 630 g cao
- **Answer: 630 g**

Question 59

- **B1** £50 cao
- **Answer: £50**

Question 60

- **B1** 4 cao
- **Answer: 4**

Question 61

- **B1** £0.60 cao
- **Answer: £0.60**

Question 62

- **B1** 4 : 9 cao
- **Answer: 4 : 9**

Question 63

- **B1** £0.60 cao
- **Answer: £0.60**

Question 64

- **B1** £0.90 cao
- **Answer: £0.90**

Question 65

- **B1** the 900 g pack cao
- **Answer: the 900 g pack**

Question 66

- **B1** £45 cao
- **Answer: £45**

Question 67

- **B1** 480 g cao
- **Answer: 480 g**

Question 68

- **B1** 7 : 12 cao
- **Answer: 7 : 12**

Question 69

- **B1** the 5-pack cao
- **Answer: the 5-pack**

Question 70

- **B1** 33 cao
- **Answer:** 33

Question 71

- **B1** 117 km cao
- **Answer:** 117 km

Question 72

- **B1** 15 cao
- **Answer:** 15

Question 73

- **B1** the 4 litre bottle cao
- **Answer:** the 4 litre bottle

Question 74

- **B1** 3 : 7 cao
- **Answer:** 3 : 7

Question 75

- **B1** £1.50 cao
- **Answer:** £1.50

Question 76

- **B1** £60 cao
- **Answer:** £60

Question 77

- **B1** 15 eggs cao
- **Answer:** 15 eggs

Question 78

- **B1** the 750 g pack cao
- **Answer:** the 750 g pack

Question 79

- **B1** 72 cao
- **Answer:** 72

Question 80

- **B1** 720 g cao
- **Answer:** 720 g