2.19 Speed Drills: Ratio, Proportion and Scaling: 30-minute Pack

Total Marks

GL ASSESSMENT EP.M20 · Calculators not allowed · about 30 minutes

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. 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 Share 18 stickers between Jack and Sunita in the ratio 1 : 2. Find how many stickers Sunita gets.

(1)

2 Share 63 counters between Ravi and Chloe in the ratio 4 : 5. Find how many counters Ravi gets.

(1)

3 100 g of icing sugar is shared between two cakes in the ratio 3 : 7. Find the mass of the larger share.

(1)

4 Share £72 between Nadia, Oliver and Priya in the ratio 2 : 3 : 4. Find how much Oliver gets.

(1)

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5 Share 90 marbles between three friends in the ratio 1 : 2 : 3. Find the size of the largest share.

(1)

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6 Two numbers are in the ratio 3 : 5 and their sum is 96. Find the smaller number.

(1)

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7 Simplify the ratio 6 : 9 to its simplest form.

(1)

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8 Share £110 between Kwame and Zara in the ratio 4 : 7. Find how much more Zara gets than Kwame.

(1)

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9 132 counters are shared between three players in the ratio 3 : 4 : 5. Find the size of the middle share.

(1)

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10 A fruit drink of 3.5 litres is made from squash and water in the ratio 1 : 6. Find how many litres of water it contains.

(1)

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11 65 kg of flour is shared between two bakeries in the ratio 8 : 5. Find how much the smaller bakery receives.

(1)

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12 A journey of 165 km is split into two legs in the ratio 2 : 9. Find the length of the shorter leg.

(1)

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13 Share £56 between three charities in the ratio 1 : 2 : 4. Find how much the charity with the smallest share receives.

(1)

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14 The angles of a triangle are in the ratio 2 : 3 : 4. Find the size of the largest angle.

(1)

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15 Two amounts are shared in the ratio 3 : 8. The smaller amount is £45. Find the total amount shared.

(1)

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16 Simplify the ratio 12 : 18 to its simplest form.

(1)

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17 Three sisters share a bonus in the ratio 2 : 3 : 5. The eldest receives £24 more than the youngest. Find the total bonus shared.

(1)

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18 Block 3: Unitary method and recipe scaling - Target: 5 minutes. 3 pens cost £6. Find the cost of 1 pen.

(1)

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19 5 identical books cost £15. Find the cost of 2 books.

(1)

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20 A recipe for 6 people uses 300 g of butter. Find how much butter is needed for 9 people.

(1)

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21 8 identical tickets cost £56. Find the cost of 5 tickets.

(1)

---

22 12 metres of fabric cost £54. Find the cost of 7 metres.

(1)

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23 A car travels 75 km using 5 litres of fuel. Find how far it can travel on 8 litres.

(1)

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24 A recipe for 5 people uses 250 g of pasta. Find how much pasta is needed for 12 people.

(1)

---

25 Simplify the ratio 15 : 20 to its simplest form.

(1)

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26 A job needs 72 worker-hours shared equally between 9 workers. Find how many hours each worker puts in.

(1)

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27 A recipe for 3 people uses 2 eggs. Find how many eggs are needed for 15 people.

(1)

---

28 7 identical calculators cost £84. Find the cost of 11 calculators.

(1)

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29 A printer prints 45 pages in 5 minutes. Find how many pages it prints in 8 minutes.

(1)

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30 A recipe for 6 people uses 900 ml of stock. Find how much stock is needed for 4 people.

(1)

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31 A 6-pack of fruit bars costs £2.40. A single fruit bar costs 45p. State which is better value: the 6-pack, or 6 single bars.

(1)

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32 Complete the missing number: 7 : 9 = 21 : ___

(1)

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Mark scheme · 2.19 Speed Drills: Ratio, Proportion and Scaling: 30-minute Pack

Question 1

12 cao **B1**

Answer: 12

Question 2

28 cao **B1**

Answer: 28

Question 3

70 g cao **B1**

Answer: 70 g

Question 4

£24 cao **B1**

Answer: £24

Question 5

45 cao **B1**

Answer: 45

Question 6

36 cao **B1**

Answer: 36

Question 7

2 : 3 oe cao **B1**

Answer: 2 : 3

Question 8

£30 cao **B1**

Answer: £30

Question 9

44 cao **B1**

Answer: 44

Question 10

3 litres cao **B1**

Answer: 3 litres

Question 11

25 kg cao **B1**

Answer: 25 kg

Question 12

30 km cao **B1**

Answer: 30 km

Question 13

£8 cao **B1**

Answer: £8

Question 14

80 degrees cao **B1**

Answer: 80 degrees

Question 15

£165 cao **B1**

Answer: £165

Question 16

2 : 3 oe cao **B1**

Answer: 2 : 3

Question 17

£80 cao **B1**

Answer: £80

Question 18

£2 cao **B1**

Answer: £2

Question 19

£6 cao **B1**

Answer: £6

Question 20

450 g cao **B1**

Answer: 450 g

Question 21

£35 cao **B1**

Answer: £35

Question 22

£31.50 cao **B1**

Answer: £31.50

Question 23

120 km cao **B1**

Answer: 120 km

Question 24

600 g cao **B1**

Answer: 600 g

Question 25

3 : 4 oe cao **B1**

Answer: 3 : 4

Question 26

8 hours cao **B1**

Answer: 8 hours

Question 27

10 eggs cao **B1**

Answer: 10 eggs

Question 28

£132 cao **B1**

Answer: £132

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Question 29

72 pages cao **B1**

Answer: 72 pages

Question 30

600 ml cao **B1**

Answer: 600 ml

Question 31

the 6-pack cao **B1**

Answer: the 6-pack

Question 32

27 cao **B1**

Answer: 27

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