2.36 Ratio and Proportion Depth: 30-minute Pack

GL ASSESSMENT EP.M40 · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Arjun, Chloe and Kwame share 88 raffle tickets in the ratio 2:4:5. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 40
- ☐ B) 3
- ☐ C) 48
- ☐ D) 24
- ☐ E) 25

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2 Ethan, Rhys and Dylan share 64 stamps in the ratio 1:3:4. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 24
- ☐ B) 40
- ☐ C) 8
- ☐ D) 32
- ☐ E) 3

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3 Rhys, Declan and Hamza share 45 pencils in the ratio 7:6:2. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 24
- ☐ B) 15
- ☐ C) 5
- ☐ D) 21
- ☐ E) 6

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4 A decorator mixes blue paint and white paint in the ratio 3 : 8 to make a particular shade of grey. Calculate how much white paint is needed for 45 ml of blue paint.

(2)

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5 Aisha, Dylan and Tariq share 112 pencils in the ratio 6:7:3. How many does Dylan get?

- ☐ A) 42
- ☐ B) 63
- ☐ C) 49
- ☐ D) 50
- ☐ E) 21

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6 Ethan, Callum and Hamza share 204 raffle tickets in the ratio 4:7:6. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 36
- ☐ B) 3
- ☐ C) 84
- ☐ D) 120
- ☐ E) 132

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7 Kofi, Anya and Tom share 56 badges in the ratio 4:7:3. How many does Anya get?

- ☐ A) 27
- ☐ B) 12
- ☐ C) 4
- ☐ D) 28
- ☐ E) 16

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8 Zainab, Ffion and Sienna share 24 marbles in the ratio 3:5:4. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 5
- [ ] B) 2
- [ ] C) 10
- [ ] D) 4
- [ ] E) 3

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9 Dylan, Kofi and Imogen share 60 shells in the ratio 6:1:3. How many does Kofi get?

- [ ] A) 6
- [ ] B) 7
- [ ] C) 18
- [ ] D) 54
- [ ] E) 36

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10 Chloe, Anya and Niamh share 56 conkers in the ratio 7:2:5. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 28
- [ ] B) 20
- [ ] C) 5
- [ ] D) 21
- [ ] E) 8

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11 Priya, Anya and Niamh share 48 beads in the ratio 4:7:1. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 28
- [ ] B) 20
- [ ] C) 6
- [ ] D) 32
- [ ] E) 24

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12 Tom, Oliver and Dylan share 90 stamps in the ratio 1:6:3. How many does Oliver get?

- ☐ A) 27
- ☐ B) 36
- ☐ C) 9
- ☐ D) 54
- ☐ E) 30

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13 £1 is worth $1.25. Calculate how many dollars a tourist receives for £68.

(2)

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14 Fatima, Zainab and Dylan share 48 football cards in the ratio 3:1:2. How many does Zainab get?

- ☐ A) 40
- ☐ B) 8
- ☐ C) 16
- ☐ D) 9
- ☐ E) 24

---

15 Dylan, Kofi and Jack share 42 raffle tickets in the ratio 1:4:2. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 6
- ☐ B) 3
- ☐ C) 18
- ☐ D) 24
- ☐ E) 30

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16 Callum, Anya and Kwame share 28 plants in the ratio 3:7:4. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 8
- [ ] B) 14
- [ ] C) 6
- [ ] D) 4
- [ ] E) 7

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17 Ethan, Grace and Kwame share 88 football cards in the ratio 3:7:1. How many does Grace get?

- [ ] A) 57
- [ ] B) 8
- [ ] C) 55
- [ ] D) 24
- [ ] E) 56

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18 Oliver, Sienna and Hamza share 102 stickers in the ratio 7:6:4. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 42
- [ ] B) 18
- [ ] C) 3
- [ ] D) 66
- [ ] E) 60

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19 Noah, Priya and Anya share 84 stamps in the ratio 2:7:5. How many does Priya get?

- [ ] A) 42
- [ ] B) 41
- [ ] C) 12
- [ ] D) 30
- [ ] E) 28

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20 Dylan, Tom and Ravi share 98 beads in the ratio 4:7:3. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 70
- [ ] B) 49
- [ ] C) 4
- [ ] D) 28
- [ ] E) 21

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21 Kofi, Grace and Aisha share 90 shells in the ratio 7:1:2. How many does Grace get?

- [ ] A) 30
- [ ] B) 18
- [ ] C) 81
- [ ] D) 63
- [ ] E) 9

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22 Hamza, Amara and Dylan share 60 raffle tickets in the ratio 7:6:2. How many does Amara get?

- [ ] A) 24
- [ ] B) 23
- [ ] C) 8
- [ ] D) 28
- [ ] E) 20

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23 Priya, Chloe and Jack share 96 raffle tickets in the ratio 2:5:1. How many more does the person with the largest share get than the person with the smallest?

- [ ] A) 4
- [ ] B) 48
- [ ] C) 12
- [ ] D) 36
- [ ] E) 60

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24 Isla, Callum and Anya share 180 badges in the ratio 6:7:2. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 61
- ☐ B) 5
- ☐ C) 84
- ☐ D) 60
- ☐ E) 24

---

25 Ewan, Harry and Rhys share 90 marbles in the ratio 3:5:7. How many does Harry get?

- ☐ A) 31
- ☐ B) 29
- ☐ C) 42
- ☐ D) 30
- ☐ E) 18

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26 Kwame, Callum and Poppy share 99 shells in the ratio 3:2:4. How many more does the person with the largest share get than the person with the smallest?

- ☐ A) 66
- ☐ B) 22
- ☐ C) 21
- ☐ D) 2
- ☐ E) 44

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27 A sum of money is shared between Ade and Bo in the ratio 7 : 5. Ade then gives Bo £24, after which they have equal amounts of money. Calculate the original total sum of money shared between them.

(4)

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Mark scheme · 2.36 Ratio and Proportion Depth: 30-minute Pack

Question 1

correct option D (24) cao; 88 / 11 = 8 per part **B1**

Answer: D) 24

Question 2

correct option A (24) cao; 64 / 8 = 8 per part **B1**

Answer: A) 24

Question 3

correct option B (15) cao; 45 / 15 = 3 per part **B1**

Answer: B) 15

Question 4

scale factor found: 45/3 = 15, or equivalent method **M1**

120 ml cao **A1**

Answer: 120 ml

Question 5

correct option C (49) cao; 112 / 16 = 7 per part **B1**

Answer: C) 49

Question 6

correct option A (36) cao; 204 / 17 = 12 per part **B1**

Answer: A) 36

Question 7

correct option D (28) cao; 56 / 14 = 4 per part **B1**

Answer: D) 28

Question 8

correct option D (4) cao; 24 / 12 = 2 per part **B1**

Answer: D) 4

Question 9

correct option A (6) cao; 60 / 10 = 6 per part **B1**

Answer: A) 6

Question 10

correct option B (20) cao; 56 / 14 = 4 per part **B1**

Answer: B) 20

Question 11

correct option E (24) cao; 48 / 12 = 4 per part **B1**

Answer: E) 24

Question 12

correct option D (54) cao; 90 / 10 = 9 per part **B1**

Answer: D) 54

Question 13

68 x 1.25 set up, or equivalent method **M1**

$85 cao **A1**

Answer: $85

Question 14

correct option B (8) cao; 48 / 6 = 8 per part **B1**

Answer: B) 8

Question 15

correct option C (18) cao; 42 / 7 = 6 per part **B1**

Answer: C) 18

Question 16

correct option A (8) cao; 28 / 14 = 2 per part **B1**

Answer: A) 8

Question 17

correct option E (56) cao; 88 / 11 = 8 per part **B1**

Answer: E) 56

Question 18

correct option B (18) cao; 102 / 17 = 6 per part **B1**

Answer: B) 18

Question 19

correct option A (42) cao; 84 / 14 = 6 per part **B1**

Answer: A) 42

Question 20

correct option D (28) cao; 98 / 14 = 7 per part **B1**

Answer: D) 28

Question 21

correct option E (9) cao; 90 / 10 = 9 per part **B1**

Answer: E) 9

Question 22

correct option A (24) cao; 60 / 15 = 4 per part **B1**

Answer: A) 24

Question 23

correct option B (48) cao; 96 / 8 = 12 per part **B1**

Answer: B) 48

Question 24

correct option D (60) cao; 180 / 15 = 12 per part **B1**

Answer: D) 60

Question 25

correct option D (30) cao; 90 / 15 = 6 per part **B1**

Answer: D) 30

Question 26

correct option B (22) cao; 99 / 9 = 11 per part **B1**

Answer: B) 22

Question 27

sets up equation using unit value x: 7x - 24 = 5x + 24; accept an equivalent route to the same value without algebra, such as reasoning in ratio units **M1**

dep: solves to find x = 24 **M1**

dep: original amounts found (Ade = 7 x 24 = 168, Bo = 5 x 24 = 120) **M1**

£288 cao **A1**

Answer: £288

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