2.6 Ratio and Proportion: 30-minute Pack

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 9 identical notebooks cost £13.50. Calculate the cost of 5 of these notebooks.

(3)

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2 Anya and Ravi share 99 marbles in the ratio 8:1. How many marbles does Anya get?

- ☐ A) 88
- ☐ B) 89
- ☐ C) 11
- ☐ D) 880
- ☐ E) 87

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3 Yusuf has 1050 g of sugar and 5 kg of flour. What is the ratio of sugar to flour in its simplest form?

- ☐ A) 210:1
- ☐ B) 21:100
- ☐ C) 1050:5000
- ☐ D) 21:121
- ☐ E) 100:21

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4 Amara and Yusuf share £45 in the ratio 2:7. How much money does Amara get?

- ☐ A) £35.00
- ☐ B) £5.00
- ☐ C) £11.00
- ☐ D) £22.50
- ☐ E) £10.00

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5 Jack has 840p of pocket money and £7 of savings. What is the ratio of pocket money to savings in its simplest form?

- [ ] A) 840:700
- [ ] B) 120:1
- [ ] C) 5:6
- [ ] D) 6:5
- [ ] E) 6:11

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6 Imogen and Hamza share £18 in the ratio 5:1. How much money does Imogen get?

- [ ] A) £14.00
- [ ] B) £9.00
- [ ] C) £15.00
- [ ] D) £3.60
- [ ] E) £3.00

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7 Harry and Ethan share 8 beads in the ratio 3:1. How many beads does Harry get?

- [ ] A) 2
- [ ] B) 7
- [ ] C) 5
- [ ] D) 4
- [ ] E) 6

---

8 Leo has 600 g of sugar and 5 kg of flour. What is the ratio of sugar to flour in its simplest form?

- [ ] A) 3:28
- [ ] B) 25:3
- [ ] C) 120:1
- [ ] D) 3:25
- [ ] E) 120000:1

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9 Ravi, Ethan and Aisha share £198 in the ratio 8:7:3. How much money does Aisha get?

- [ ] A) £88.00
- [ ] B) £165.00
- [ ] C) £33.00
- [ ] D) £34.00
- [ ] E) £11.00

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10 Declan and Yusuf share £12 in the ratio 1:2. How much money does Declan get?

- [ ] A) £5.00
- [ ] B) £12.00
- [ ] C) £6.00
- [ ] D) £4.00
- [ ] E) £8.00

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11 Ewan has 450 g of sugar and 1 kg of flour. What is the ratio of sugar to flour in its simplest form?

- [ ] A) 9:20
- [ ] B) 9:29
- [ ] C) 20:9
- [ ] D) 450:1
- [ ] E) 450000:1

---

12 Lily has 180 minutes of reading and 1 hour of homework. What is the ratio of reading to homework in its simplest form?

- [ ] A) 180:1
- [ ] B) 180:60
- [ ] C) 3:1
- [ ] D) 3:4
- [ ] E) 1:3

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13 Maya and Arjun share 15 sweets in the ratio 4:1. How many sweets does Maya get?

- [ ] A) 120
- [ ] B) 12
- [ ] C) 11
- [ ] D) 13
- [ ] E) 3

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14 Leo has 30p of pocket money and £2 of savings. What is the ratio of pocket money to savings in its simplest form?

- [ ] A) 20:3
- [ ] B) 1500:1
- [ ] C) 3:20
- [ ] D) 15:1
- [ ] E) 3:23

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15 Amara and Yusuf share 28 marbles in the ratio 3:4. How many marbles does Yusuf get?

- [ ] A) 16
- [ ] B) 4
- [ ] C) 12
- [ ] D) 17
- [ ] E) 15

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16 Hamza has 135 minutes of reading and 5 hours of homework. What is the ratio of reading to homework in its simplest form?

- [ ] A) 27:1
- [ ] B) 9:20
- [ ] C) 1620:1
- [ ] D) 20:9
- [ ] E) 9:29

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17 Anya and Jack share 44 badges in the ratio 9:2. How many badges does Jack get?

- [ ] A) 22
- [ ] B) 4
- [ ] C) 7
- [ ] D) 8
- [ ] E) 36

---

18 Lily has 40 minutes of reading and 8 hours of homework. What is the ratio of reading to homework in its simplest form?

- [ ] A) 300:1
- [ ] B) 1:13
- [ ] C) 12:1
- [ ] D) 5:1
- [ ] E) 1:12

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19 Kwame and Esme share 132 stamps in the ratio 5:6. How many stamps does Esme get?

- [ ] A) 22
- [ ] B) 12
- [ ] C) 72
- [ ] D) 60
- [ ] E) 71

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20 Fatima has 145 minutes of reading and 4 hours of homework. What is the ratio of reading to homework in its simplest form?

- [ ] A) 145:4
- [ ] B) 48:29
- [ ] C) 145:240
- [ ] D) 29:48
- [ ] E) 29:77

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21 Amara and Jack share 182 badges in the ratio 6:7. How many badges does Jack get?

- [ ] A) 14
- [ ] B) 84
- [ ] C) 91
- [ ] D) 97
- [ ] E) 98

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22 Amara and Priya share 21 shells in the ratio 5:2. How many shells does Amara get?

- [ ] A) 15
- [ ] B) 6
- [ ] C) 3
- [ ] D) 16
- [ ] E) 14

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23 Fatima has 50 minutes of reading and 3 hours of homework. What is the ratio of reading to homework in its simplest form?

- [ ] A) 5:18
- [ ] B) 50:3
- [ ] C) 18:5
- [ ] D) 5:23
- [ ] E) 1000:1

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24 Rhys and Sana share £20 in the ratio 3:1. How much money does Rhys get?

- [ ] A) £16.00
- [ ] B) £10.00
- [ ] C) £15.00
- [ ] D) £5.00
- [ ] E) £14.00

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25 Amara, Harry and Megan share 68 marbles in the ratio 7:7:3. How many marbles does Megan get?

- [ ] A) 28
- [ ] B) 12
- [ ] C) 11
- [ ] D) 13
- [ ] E) 4

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26 Megan has 150 cm of ribbon and 4 m of string. What is the ratio of ribbon to string in its simplest form?

- [ ] A) 8:3
- [ ] B) 3:11
- [ ] C) 3750:1
- [ ] D) 3:8
- [ ] E) 75:2

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27 A map has a scale of 1 : 25 000. Two towns are 6 cm apart on the map. Calculate the real distance between the towns, giving your answer in kilometres.

(3)

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28 In a swimming club, the ratio of boys to girls is 7 : 5. There are 18 more boys than girls. Calculate the total number of members in the club.

(3)

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Mark scheme · 2.6 Ratio and Proportion: 30-minute Pack

Question 1

cost of 1 notebook found: 13.50/9 = 1.50 **M1**

dep: their 1.50 x 5 **M1**

£7.50 cao **A1**

Answer: £7.50

Question 2

correct option A (88) cao; 99 / 9 = 11 per part, then 11 x 8 = 88 **B1**

Answer: A) 88

Question 3

correct option B (21:100) cao; convert to g: 1050:5000 then divide by the highest common factor **B1**

Answer: B) 21:100

Question 4

correct option E (£10.00) cao; 45 / 9 = 5 per part, then 5 x 2 = 10 **B1**

Answer: E) £10.00

Question 5

correct option D (6:5) cao; convert to p: 840:700 then divide by the highest common factor **B1**

Answer: D) 6:5

Question 6

correct option C (£15.00) cao; 18 / 6 = 3 per part, then 3 x 5 = 15 **B1**

Answer: C) £15.00

Question 7

correct option E (6) cao; 8 / 4 = 2 per part, then 2 x 3 = 6 **B1**

Answer: E) 6

Question 8

correct option D (3:25) cao; convert to g: 600:5000 then divide by the highest common factor **B1**

Answer: D) 3:25

Question 9

correct option C (£33.00) cao; 198 / 18 = 11 per part, then 11 x 3 = 33 **B1**

Answer: C) £33.00

Question 10

correct option D (£4.00) cao; 12 / 3 = 4 per part, then 4 x 1 = 4 **B1**

Answer: D) £4.00

Question 11

correct option A (9:20) cao; convert to g: 450:1000 then divide by the highest common factor **B1**

Answer: A) 9:20

Question 12

correct option C (3:1) cao; convert to minutes: 180:60 then divide by the highest common factor **B1**

Answer: C) 3:1

Question 13

correct option B (12) cao; 15 / 5 = 3 per part, then 3 x 4 = 12 **B1**

Answer: B) 12

Question 14

correct option C (3:20) cao; convert to p: 30:200 then divide by the highest common factor **B1**

Answer: C) 3:20

Question 15

correct option A (16) cao; 28 / 7 = 4 per part, then 4 x 4 = 16 **B1**

Answer: A) 16

Question 16

correct option B (9:20) cao; convert to minutes: 135:300 then divide by the highest common factor **B1**

Answer: B) 9:20

Question 17

correct option D (8) cao; 44 / 11 = 4 per part, then 4 x 2 = 8 **B1**

Answer: D) 8

Question 18

correct option E (1:12) cao; convert to minutes: 40:480 then divide by the highest common factor **B1**

Answer: E) 1:12

Question 19

correct option C (72) cao; 132 / 11 = 12 per part, then 12 x 6 = 72 **B1**

Answer: C) 72

Question 20

correct option D (29:48) cao; convert to minutes: 145:240 then divide by the highest common factor **B1**

Answer: D) 29:48

Question 21

correct option E (98) cao; 182 / 13 = 14 per part, then 14 x 7 = 98 **B1**

Answer: E) 98

Question 22

correct option A (15) cao; 21 / 7 = 3 per part, then 3 x 5 = 15 **B1**

Answer: A) 15

Question 23

correct option A (5:18) cao; convert to minutes: 50:180 then divide by the highest common factor **B1**

Answer: A) 5:18

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Question 24

correct option C (£15.00) cao; 20 / 4 = 5 per part, then 5 x 3 = 15 **B1**

Answer: C) £15.00

Question 25

correct option B (12) cao; 68 / 17 = 4 per part, then 4 x 3 = 12 **B1**

Answer: B) 12

Question 26

correct option D (3:8) cao; convert to cm: 150:400 then divide by the highest common factor **B1**

Answer: D) 3:8

Question 27

real distance found in cm: 6 x 25 000 = 150 000 **M1**

dep: converts their 150 000 cm to metres then kilometres (150 000 / 100 = 1500 m, then / 1000) **M1**

1.5 km cao **A1**

Answer: 1.5 km

Question 28

difference in parts found (7 - 5 = 2) and unit value found (18/2 = 9) **M1**

dep: total parts found (7 + 5 = 12) and their 9 x 12 **M1**

108 cao **A1**

Answer: 108

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