3.3 Sharing in a Given Ratio: 2-hour Pack

Calculators not allowed · about 120 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Orla and Leo share 220 sweets in the ratio 3 : 7. How much does each person get?

(3)

2 Quinn and Tom share £132 in the ratio 1 : 3. How much does each person get?

(3)

3 Maya and Hamza share 360 sweets in the ratio 5 : 7. How much does each person get?

(3)

4 The ratio of boys to girls in a club is 1 : 2. There are 9 more girls than boys. How many boys and girls are there altogether?

(4)

© Revision Library | revisionlibrary.co.uk

5 Sofia, Quinn and Wendy share £153 in the ratio 2 : 3 : 4. How much does each person get?

(3)

---

6 Sofia and Tom share 156 sweets in the ratio 5 : 1. How much does each person get?

(3)

---

7 Isla and Hamza share £144 in the ratio 5 : 3. How much does each person get?

(3)

---

8 Share 21 sweets between three friends in the ratio 1:1:1. How many sweets does each friend get?

(2)

---

9 The ratio of adults to children at a concert is 4 : 7. There are 99 adults and children altogether. How many more children than adults are there?

(3)

© Revision Library | revisionlibrary.co.uk

10 Sand and cement are mixed in the ratio 1 : 5 to make mortar. Work out how much sand is in 48 kg of mortar.

(3)

---

11 The ratio of red to blue counters in a bag is 4 : 5. There are 36 red and blue altogether. How many more blue than red are there?

(3)

---

12 Victor and Tom share 108 sweets in the ratio 2 : 7. How much does each person get?

(3)

---

13 Red and white are mixed in the ratio 5 : 2 to make paint. Sam has 55 litres of red and 28 litres of white. What is the greatest amount of paint he can make?

(4)

---

14 Uma and Ben share 42 sweets in the ratio 1 : 1. How much does each person get?

(3)

© Revision Library | revisionlibrary.co.uk

15 Chloe, Quinn and Wendy share £153 in the ratio 7 : 5 : 5. How much does each person get?

(3)

---

16 The ratio of adults to children at a concert is 1 : 2. There are 4 children. How many adults are there?

(3)

---

17 The ratio of red to blue counters in a bag is 4 : 3. There are 36 blue. How many red are there?

(3)

---

18 Red and white are mixed in the ratio 1 : 5 to make paint. How many litres of white are needed to mix with 6 litres of red?

(2)

© Revision Library | revisionlibrary.co.uk

19 The ratio of adults to children at a concert is 7 : 2. There are 40 more adults than children. How many adults and children are there altogether?

(4)

---

20 Grace and Elena share £261 in the ratio 4 : 5. How much does each person get?

(3)

---

21 Orange juice and lemonade are mixed in the ratio 2 : 7 to make punch. How many ml of lemonade are needed to mix with 1100 ml of orange juice?

(2)

---

22 The ratio of boys to girls in a club is 5 : 8. There are 21 more girls than boys. How many boys and girls are there altogether?

(4)

---

23 Sofia and Priya share 200 sweets in the ratio 3 : 7. How much does each person get?

(3)

© Revision Library | revisionlibrary.co.uk

24 The ratio of red to blue counters in a bag is 1 : 5. There are 42 red and blue altogether. How many more blue than red are there?

(3)

---

25 Orange juice and lemonade are mixed in the ratio 4 : 3 to make punch. Work out how much orange juice is in 2100 ml of punch.

(3)

---

26 A total of 56 centimetres is shared between two pieces in the ratio 3:5. Find the length of the smaller piece.

(2)

---

27 Sand and cement are mixed in the ratio 1 : 3 to make mortar. Sam has 11 kg of sand and 42 kg of cement. What is the greatest amount of mortar he can make?

(4)

© Revision Library | revisionlibrary.co.uk

28 Orange juice and lemonade are mixed in the ratio 4 : 3 to make punch. Sam has 2200 ml of orange juice and 1659 ml of lemonade. What is the greatest amount of punch he can make?

(4)

---

29 Zain and Ben share £90 in the ratio 2 : 3. How much does each person get?

(3)

---

30 Orange juice and lemonade are mixed in the ratio 5 : 7 to make punch. Work out how much orange juice is in 3000 ml of punch.

(3)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 3.3 Sharing in a Given Ratio: 2-hour Pack

Question 1

3 + 7 = 10 parts	M1
220 ÷ 10 = 22	M1
Orla 66, Leo 154 cao	A1

Answer: **Orla 66, Leo 154**

Question 2

1 + 3 = 4 parts	M1
132 ÷ 4 = 33	M1
Quinn £33, Tom £99 cao	A1

Answer: **Quinn £33, Tom £99**

Question 3

5 + 7 = 12 parts	M1
360 ÷ 12 = 30	M1
Maya 150, Hamza 210 cao	A1

Answer: **Maya 150, Hamza 210**

Question 4

difference in parts 1	M1
9 ÷ 1 = 9	M1
3 x 9	M1
27 cao	A1

Answer: **27**

Question 5

2 + 3 + 4 = 9 parts	M1
153 ÷ 9 = 17	M1
Sofia £34, Quinn £51, Wendy £68 cao	A1

Answer: **Sofia £34, Quinn £51, Wendy £68**

Question 6

5 + 1 = 6 parts	M1
156 ÷ 6 = 26	M1
Sofia 130, Tom 26 cao	A1

Answer: **Sofia 130, Tom 26**

Question 7

5 + 3 = 8 parts	M1
144 ÷ 8 = 18	M1
Isla £90, Hamza £54 cao	A1

Answer: **Isla £90, Hamza £54**

Question 8

one unit = 21 / (1+1+1) = 7	M1
each friend gets 7 sweets cao	A1

Answer: **7, 7, 7**

Question 9

99 ÷ 11 = 9	M1
3 x 9	M1
27 cao	A1

Answer: **27**

Question 10

1 + 5 = 6 parts	M1
48 ÷ 6 x 1	M1
8 kg cao	A1

Answer: **8 kg**

Question 11

36 ÷ 9 = 4	M1
1 x 4	M1
4 cao	A1

Answer: **4**

Question 12

2 + 7 = 9 parts	M1
108 ÷ 9 = 12	M1
Victor 24, Tom 84 cao	A1

Answer: **Victor 24, Tom 84**

Question 13

red supports 55 ÷ 5 = 11 units	M1
white supports 28 ÷ 2 = 14 units	M1
uses the smaller: 11 units x 7	M1
77 litres cao	A1

Answer: **77 litres**

Question 14

1 + 1 = 2 parts	M1
42 ÷ 2 = 21	M1
Uma 21, Ben 21 cao	A1

Answer: **Uma 21, Ben 21**

Question 15

7 + 5 + 5 = 17 parts	M1
153 ÷ 17 = 9	M1
Chloe £63, Quinn £45, Wendy £45 cao	A1

Answer: **Chloe £63, Quinn £45, Wendy £45**

Question 16

4 ÷ 2	M1
2 x 1	M1
2 cao	A1

Answer: **2**

Question 17

36 ÷ 3 = 12	M1
12 x 4	M1
48 cao	A1

Answer: **48**

Question 18

6 ÷ 1 = 6	M1
30 litres cao	A1

Answer: **30 litres**

© Revision Library | revisionlibrary.co.uk

Question 19

difference in parts 5	M1
40 ÷ 5 = 8	M1
9 x 8	M1
72 cao	A1

Answer: **72**

Question 20

4 + 5 = 9 parts	M1
261 ÷ 9 = 29	M1
Grace £116, Elena £145 cao	A1

Answer: **Grace £116, Elena £145**

Question 21

1100 ÷ 2 = 550	M1
3850 ml cao	A1

Answer: **3850 ml**

Question 22

difference in parts 3	M1
21 ÷ 3 = 7	M1
13 x 7	M1
91 cao	A1

Answer: **91**

Question 23

3 + 7 = 10 parts	M1
200 ÷ 10 = 20	M1
Sofia 60, Priya 140 cao	A1

Answer: **Sofia 60, Priya 140**

Question 24

42 ÷ 6 = 7	M1
4 x 7	M1
28 cao	A1

Answer: **28**

Question 25

4 + 3 = 7 parts	M1
2100 ÷ 7 x 4	M1
1200 ml cao	A1

Answer: **1200 ml**

Question 26

one unit = 56 / (3+5) = 56/8 = 7	M1
smaller piece = 3 x 7 = 21 cm cao	A1

Answer: **21 cm**

Question 27

sand supports 11 ÷ 1 = 11 units	M1
cement supports 42 ÷ 3 = 14 units	M1
uses the smaller: 11 units x 4	M1
44 kg cao	A1

Answer: **44 kg**

Question 28

orange juice supports 2200 ÷ 4 = 550 units	M1
lemonade supports 1659 ÷ 3 = 553 units	M1
uses the smaller: 550 units x 7	M1
3850 ml cao	A1

Answer: **3850 ml**

Question 29

2 + 3 = 5 parts	M1
90 ÷ 5 = 18	M1
Zain £36, Ben £54 cao	A1

Answer: **Zain £36, Ben £54**

Question 30

5 + 7 = 12 parts	M1
3000 ÷ 12 x 5	M1
1250 ml cao	A1

Answer: **1250 ml**

© Revision Library | revisionlibrary.co.uk