4.1 Fractions and Problem Solving: 2-hour Pack

STA NC-KS1-MATHS-STA · Calculators not allowed · about 120 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Amara bakes 24 flapjacks. She shares them equally between herself and 3 friends. She then eats one third of her own share as a snack.

Work out how many flapjacks Amara eats as a snack. Show your working.

Answer: ___

(3)

---

2 A class has 28 pupils. One quarter of the pupils walk to school, one half of the pupils come by car, and the rest come by bus.

(a) Work out how many pupils walk to school and how many pupils come by car. **(2)**

(b) Work out how many pupils come by bus. Show a check that your answer is correct. **(2)**

© Revision Library | revisionlibrary.co.uk

3 Noah has 8 biscuits. Noah gives a quarter of them to a friend. How many biscuits does Noah give away?

Answer: ___

(1)

---

4 Ella is 2 years old. Ella's grandad is 50 years old. How many years older is Ella's grandad?

Answer: ___

(1)

---

5 Yusuf has 15 cherries. Yusuf gives away 11 and then finds 4 more. How many cherries does Yusuf have now?

Answer: ___

(2)

---

6 Here are four number cards: 2, 4, 5, 7.

Which two cards add up to 11?

Answer: ___ and ___

(1)

© Revision Library | revisionlibrary.co.uk

7 A sandwich is cut into 4 equal pieces. George eats 3 pieces.

What fraction of the sandwich does George eat?

Answer: ___

(1)

---

8 Priya shares 32 balloons equally between 4 friends.

Write the fraction of the balloons each friend gets, then work out how many balloons each friend gets.

Answer: ___ and ___

(2)

---

9 Ella has 8 marbles. Kiran has 10 marbles. Who has more marbles, and how many more?

Answer: ___

(1)

---

10 Find a quarter of 36.

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

11 Here are four number cards: 4, 5, 6, 9.

Which two cards add up to 11?

Answer: ___ and ___

(1)

---

12 Find a half of 4.

Answer: ___

(1)

---

13 Aaron shares 12 crayons equally between 2 friends.

Write the fraction of the crayons each friend gets, then work out how many crayons each friend gets.

Answer: ___ and ___

(2)

---

14 Tom has 12 sweets. Tom is given 1 more and then loses 2. How many sweets does Tom have now?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

15 Which is bigger, a half or a quarter of the same pizza?

Answer: ___

(1)

---

16 How many different ways can you write 7 as the sum of two whole numbers, using 0? Count 1 + 6 and 6 + 1 as different ways.

Answer: ___

(2)

---

17 Noah has 36 toy cars. Noah gives a quarter of them to a friend. How many toy cars does Noah give away?

Answer: ___

(1)

---

18 A cake is cut into 4 equal pieces. Ella eats 2 pieces.

What fraction of the cake does Ella eat?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

19 Bella thinks of a number. Bella adds 3 and gets 18. What number did Bella think of?

Answer: ___

(1)

---

20 Jade has 3 stamps. Nia has 2. How many more does Jade have than Nia?

Answer: ___

(1)

---

21 A chocolate bar is cut into 2 equal squares. Layla eats 1 square.

What fraction of the chocolate bar does Layla eat?

Answer: ___

(1)

---

22 Here are four number cards: 3, 6, 10, 11.

Which two cards add up to 21?

Answer: ___ and ___

(1)

© Revision Library | revisionlibrary.co.uk

23 Victor shares 12 stars equally between 4 friends.

Write the fraction of the stars each friend gets, then work out how many stars each friend gets.

Answer: ___ and ___

(2)

---

24 Here are four number cards: 2, 3, 6, 7.

Which two cards add up to 10?

Answer: ___ and ___

(1)

---

25 Kofi has 13 beads. Kofi is given 6 more and then loses 11. How many beads does Kofi have now?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

26 Here are four number cards: 7, 8, 10, 11.

Which two cards add up to 21?

Answer: ___ and ___

(1)

---

27 Jade has 28 balloons. Jade gives a half of them to a friend. How many balloons does Jade give away?

Answer: ___

(1)

---

28 Here are four number cards: 4, 5, 7, 9.

Which two cards add up to 14?

Answer: ___ and ___

(1)

---

29 Yusuf has 12 marbles. Ben has 10 marbles. Who has more marbles, and how many more?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

30 Here are four number cards: 2, 7, 9, 10.

Which two cards add up to 11?

Answer: ___ and ___

(1)

---

31 Ivan has 15 pencils. Ivan gives away 15 and then finds 2 more. How many pencils does Ivan have now?

Answer: ___

(2)

---

32 Here are four number cards: 2, 7, 8, 10.

Which two cards add up to 12?

Answer: ___ and ___

(1)

---

33 Uma has 10 balloons. Uma is given 1 more and then loses 1. How many balloons does Uma have now?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

34 Callum has 16 shells. Callum gives a quarter of them to a friend. How many shells does Callum give away?

Answer: ___

(1)

---

35 Here are four number cards: 4, 5, 6, 8.

Which two cards add up to 11?

Answer: ___ and ___

(1)

---

36 Noah has 11 stickers. Noah gives some to a friend and has 4 left. How many stickers did Noah give away?

Answer: ___

(1)

---

37 Tom has 8 pencils. Tom is given 6 more and then loses 12. How many pencils does Tom have now?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

38 Daisy shares 24 shells equally between 4 friends.

Write the fraction of the shells each friend gets, then work out how many shells each friend gets.

Answer: ___ and ___

(2)

---

39 A chocolate bar is cut into 2 equal squares. Jade eats 1 square.

What fraction of the chocolate bar is left?

Answer: ___

(1)

---

40 Bella is 12 years old. Bella's grandad is 60 years old. How many years older is Bella's grandad?

Answer: ___

(1)

---

41 How many quarters make a half?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

42 Find a half of 8.

Answer: ___

(1)

---

43 A pizza is cut into 2 equal slices. Isla eats 1 slice.

What fraction of the pizza is left?

Answer: ___

(1)

---

44 Chloe has 4 grapes. Chloe gives a half of them to a friend. How many grapes does Chloe give away?

Answer: ___

(1)

---

45 How many different ways can you write 5 as the sum of two whole numbers, using 0? Count 1 + 4 and 4 + 1 as different ways.

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

46 Kiran has 14 stickers. Kiran gives some to a friend and has 11 left. How many stickers did Kiran give away?

Answer: ___

(1)

---

47 Find a half of 16.

Answer: ___

(1)

---

48 Grace has 9 marbles. Mia has 14 marbles. Who has more marbles, and how many more?

Answer: ___

(1)

---

49 Mia has 13 stickers. Mia gives some to a friend and has 11 left. How many stickers did Mia give away?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

50 Aaliyah picks 24 grapes. She eats three quarters of the grapes.

Work out how many grapes Aaliyah eats. Show your working.

Answer: ___

(2)

---

51 Reece has 14 stickers. Reece gives some to a friend and has 12 left.
How many stickers did Reece give away?

Answer: ___

(1)

---

52 A pizza is cut into 2 equal slices. Reece eats 1 slice.

What fraction of the pizza does Reece eat?

Answer: ___

(1)

---

53 Here are four number cards: 2, 5, 6, 7.

Which two cards add up to 9?

Answer: ___ and ___

(1)

© Revision Library | revisionlibrary.co.uk

54 Find a quarter of 4.

Answer: ___

(1)

---

55 Two numbers add up to 13. One of the numbers is 5. What is the other number?

Answer: ___

(1)

---

56 How many different ways can you write 4 as the sum of two whole numbers, using 0? Count 1 + 3 and 3 + 1 as different ways.

Answer: ___

(2)

---

57 Chloe shares 8 stickers equally between 4 friends.

Write the fraction of the stickers each friend gets, then work out how many stickers each friend gets.

Answer: ___ and ___

(2)

© Revision Library | revisionlibrary.co.uk

58 Ella has 17 badges. George gives Ella 2 more. How many badges does Ella have now?

Answer: ___

(1)

---

59 A baker makes 24 loaves of bread. She sells half of the loaves before lunch.

Work out how many loaves she sells before lunch. Show your working.

Answer: ___

(2)

---

60 Amira has 13 stickers. Amira gives some to a friend and has 5 left. How many stickers did Amira give away?

Answer: ___

(1)

---

61 Is 1/3 of a pizza bigger than 1/2 of the same pizza? Write Yes or No.

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

62 Hana has 11 counters. Hana gives 5 to George. How many counters does Hana have left?

Answer: ___

(1)

---

63 Aaron has 15 apples. Daisy has 13. How many more does Aaron have than Daisy?

Answer: ___

(1)

---

64 Here are four number cards: 3, 4, 5, 7.

Which two cards add up to 8?

Answer: ___ and ___

(1)

---

65 How many equal parts is a shape split into if each part is a third?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 4.1 Fractions and Problem Solving: 2-hour Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

finds Amara's share, 24 / 4 = 6 (shared among Amara and 3 friends) oe	M1
finds one third of their 6, 6 / 3 = 2, dep on first method, oe, ft	M1
2 cao, ft their share if the method is correct	A1

Answer: **2 flapjacks**

Question 2

(a) 7 pupils walk to school (1/4 of 28 = 7)	B1
(a) 14 pupils come by car (1/2 of 28 = 14)	B1

(a) Answer: **7 pupils walk; 14 pupils come by car**

(b) 28 - 7 - 14 oe (subtracting the walkers and car pupils from the total), ft their part (a)	M1
(b) 7 cao, with a valid check shown, e.g. 7 + 14 + 7 = 28	A1

(b) Answer: **7 pupils come by bus**

Question 3

2 cao	B1

Answer: **2**

Question 4

48 cao	B1

Answer: **48**

Question 5

15 - 11 = 4 seen	M1
8 cao	A1

Answer: **8**

Question 6

4 and 7 cao	B1

Answer: **4 and 7**

Question 7

3/4 cao	B1

Answer: **3/4**

Question 8

1/4 seen	M1
1/4 and 8 cao	A1

Answer: **1/4 and 8**

Question 9

Kiran, 2 more cao	B1

Answer: **Kiran, 2 more**

Question 10

9 cao	B1

Answer: **9**

Question 11

5 and 6 cao	B1

Answer: **5 and 6**

Question 12

2 cao	B1

Answer: **2**

Question 13

1/2 seen	M1
1/2 and 6 cao	A1

Answer: **1/2 and 6**

Question 14

12 + 1 = 13 seen	M1
11 cao	A1

Answer: **11**

Question 15

a half cao	B1

Answer: **a half**

Question 16

lists the pairs from 0 + 7 to 7 + 0	M1
8 cao	A1

Answer: **8**

Question 17

9 cao	B1

Answer: **9**

Question 18

2/4 cao	B1

Answer: **2/4**

Question 19

15 cao	B1

Answer: **15**

Question 20

1 cao	B1

Answer: **1**

Question 21

1/2 cao	B1

Answer: **1/2**

Question 22

10 and 11 cao	B1

Answer: **10 and 11**

© Revision Library | revisionlibrary.co.uk

Question 23

1/4 seen **M1**
1/4 and 3 cao **A1**
Answer: **1/4 and 3**

Question 24

3 and 7 cao **B1**
Answer: **3 and 7**

Question 25

13 + 6 = 19 seen **M1**
8 cao **A1**
Answer: **8**

Question 26

10 and 11 cao **B1**
Answer: **10 and 11**

Question 27

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

Question 28

5 and 9 cao **B1**
Answer: **5 and 9**

Question 29

Yusuf, 2 more cao **B1**
Answer: **Yusuf, 2 more**

Question 30

2 and 9 cao **B1**
Answer: **2 and 9**

Question 31

15 - 15 = 0 seen **M1**
2 cao **A1**
Answer: **2**

Question 32

2 and 10 cao **B1**
Answer: **2 and 10**

Question 33

10 + 1 = 11 seen **M1**
10 cao **A1**
Answer: **10**

Question 34

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

Question 35

5 and 6 cao **B1**
Answer: **5 and 6**

Question 36

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

Question 37

8 + 6 = 14 seen **M1**
2 cao **A1**
Answer: **2**

Question 38

1/4 seen **M1**
1/4 and 6 cao **A1**
Answer: **1/4 and 6**

Question 39

1/2 cao **B1**
Answer: **1/2**

Question 40

48 cao **B1**
Answer: **48**

Question 41

2 cao **B1**
Answer: **2**

Question 42

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

Question 43

1/2 cao **B1**
Answer: **1/2**

Question 44

2 cao **B1**
Answer: **2**

Question 45

lists the pairs from 0 + 5 to 5 + 0 **M1**
6 cao **A1**
Answer: **6**

Question 46

3 cao **B1**
Answer: **3**

Question 47

8 cao **B1**
Answer: **8**

Question 48

Mia, 5 more cao **B1**
Answer: **Mia, 5 more**

Question 49

2 cao **B1**
Answer: **2**

© Revision Library | revisionlibrary.co.uk

Question 50

finds one quarter of 24 (24 / 4 = 6) oe, or equivalent correct method **M1**

18 cao **A1**

Answer: **18**

Question 51

2 cao **B1**

Answer: **2**

Question 52

1/2 cao **B1**

Answer: **1/2**

Question 53

2 and 7 cao **B1**

Answer: **2 and 7**

Question 54

1 cao **B1**

Answer: **1**

Question 55

8 cao **B1**

Answer: **8**

Question 56

lists the pairs from 0 + 4 to 4 + 0 **M1**

5 cao **A1**

Answer: **5**

Question 57

1/4 seen **M1**

1/4 and 2 cao **A1**

Answer: **1/4 and 2**

Question 58

19 cao **B1**

Answer: **19**

Question 59

finds half of 24 (24 / 2) oe, or equivalent correct method **M1**

12 cao **A1**

Answer: **12**

Question 60

8 cao **B1**

Answer: **8**

Question 61

No cao **B1**

Answer: **No**

Question 62

6 cao **B1**

Answer: **6**

Question 63

2 cao **B1**

Answer: **2**

Question 64

3 and 5 cao **B1**

Answer: **3 and 5**

Question 65

3 cao **B1**

Answer: **3**

© Revision Library | revisionlibrary.co.uk