10.3-6 Reasoning Practice Paper 6: 2-hour Pack

STA KS2 National Curriculum Mathematics - STA Reasoning Test Framework · Calculators not allowed · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Work out 1/2 - 1/8.

Give your answer in its simplest form.

Answer: ___

(1)

---

2 Estimate 6,852 - 1,393 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

---

3 Estimate 7,533 - 2,878 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

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4 1/5 + 2/10 =

Answer: ___

(2)

---

5 Write <, > or = in the box.

73,639 [ ] 73,924

Answer: ___

(1)

---

6 A minibus can carry 16 passengers. 138 pupils from a school need to travel to a museum by minibus. Calculate the smallest number of minibuses needed to take all the pupils.

(3)

---

7 Write <, > or = in the box.

89,783 [ ] 89,815

Answer: ___

(1)

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8 Write <, > or = in the box.

2/3 [ ] 1/5

Answer: ___

(2)

---

9 Use each of the digits 9, 1, 2, 5 once to make the smallest possible 4-digit number.

Answer: ___

(1)

---

10 Find the missing number in this sequence.

7,709, 7,959, 8,209, 8,459, ___, 8,959

Answer: ___

(1)

---

11 Round 834,338 to the nearest ten.

Answer: ___

(1)

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12 Write <, > or = in the box.

85,658 [ ] 85,678

Answer: ___

(1)

---

13 Work out 1/5 + 3/10.

Give your answer in its simplest form.

Answer: ___

(2)

---

14 Write <, > or = in the box.

2/5 [ ] 5/8

Answer: ___

(1)

---

15 Write <, > or = in the box.

1/3 [ ] 2/5

Answer: ___

(2)

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16 Write 4/8 in its simplest form.

Answer: ___

(2)

---

17 Write <, > or = in the box.

1/3 [ ] 1/5

Answer: ___

(2)

---

18 Write the Roman numeral DCCCLXXX as a number.

Answer: ___

(1)

---

19 Write <, > or = in the box.

44,749 [ ] 45,331

Answer: ___

(1)

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20 Work out 2 1/2 - 1 1/3.

Give your answer in its simplest form.

Answer: ___

(2)

---

21 Write <, > or = in the box.

2/5 [ ] 2/8

Answer: ___

(1)

---

22 What is 1,000 more than 281,153?

Answer: ___

(1)

---

23 A festival had 3,885 visitors on Saturday and 1,927 visitors on Sunday.

How many more visitors came on the busier day?

Answer: ___

(2)

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24 A festival had 3,569 visitors in May and 8,801 visitors in June.

How many visitors did it have altogether?

Answer: ___

(1)

---

25 Write 93,979 in words.

Answer: ___

(1)

---

26 Write 4/10 in its simplest form.

Answer: ___

(2)

---

27 Work out 2 5/8 - 1 1/2.

Give your answer in its simplest form.

Answer: ___

(2)

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28 Complete the partition.

150,577 = 100,000 + 50,000 + 500 + 70 + ___

Answer: ___

(1)

---

29 8/10 - 3/5 =

Answer: ___

(2)

---

30 Write 115,500 in words.

Answer: ___

(1)

---

31 What is 1,000 less than 567,862?

Answer: ___

(1)

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32 Which fraction is equivalent to 4/5?

A: 20/25 B: 20/26 C: 9/10 D: 21/25

Write the letter.

Answer: ___

(1)

---

33 Ffion is fencing a rectangular vegetable plot that is 3.5m long and 2m wide. Calculate the total length of fencing she needs to go all the way around the plot.

(2)

---

34 Work out 1 3/5 + 1 4/5.

Give your answer in its simplest form.

Answer: ___

(2)

---

35 A number line starts at 2,000 and goes up in equal steps of 500. An arrow points to the 8th mark after the start.

What number does the arrow show?

Answer: ___

(1)

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36 Write <, > or = in the box.

3/4 [ ] 3/9

Answer: ___

(2)

---

37 Work out 4 9/10 - 3 1/2.

Give your answer in its simplest form.

Answer: ___

(3)

---

38 Round 426,213 to the nearest thousand.

Answer: ___

(1)

---

39 Which fraction is equivalent to 3/4?

A: 6/8 B: 7/8 C: 6/9 D: 5/6

Write the letter.

Answer: ___

(1)

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40 Estimate 8,461 + 3,577 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

---

41 Work out 1/2 + 1/6.

Give your answer in its simplest form.

Answer: ___

(2)

---

42 Work out 1/4 + 3/4.

Give your answer in its simplest form.

Answer: ___

(1)

---

43 Kwame buys a sandwich for £2.35 and a bottle of juice for £1.20. He pays with a £5 note. Calculate how much change he gets.

(2)

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44 Write these fractions in order, starting with the smallest.

3/4, 1/10, 1/5

Answer: ___

(2)

---

45 2/4 + 8/12 =

Answer: ___

(2)

---

46 Estimate 5,271 - 2,052 by rounding each number to the nearest 1,000 first.

Answer: ___

(2)

---

47 Write <, > or = in the box.

3/5 [ ] 3/8

Answer: ___

(2)

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48 Complete the partition.

799,660 = 700,000 + 90,000 + ___ + 600 + 60

Answer: ___

(1)

---

49 Write <, > or = in the box.

81,001 [ ] 80,432

Answer: ___

(1)

---

50 Write the number nine hundred and six thousand nine hundred and fourteen in digits.

Answer: ___

(1)

---

51 What is the value of the digit 2 in 529,741?

Answer: ___

(1)

---

52 Round 439,840 to the nearest ten.

Answer: ___

(1)

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53 What is 10,000 less than 136,253?

Answer: ___

(1)

---

54 Work out 9/10 + 3/10.

Give your answer in its simplest form.

Answer: ___

(1)

---

55 Work out 3 1/4 + 1 7/8.

Give your answer in its simplest form.

Answer: ___

(2)

---

56 Find the missing number in this sequence.

914, 889, 864, ___, 814, 789

Answer: ___

(1)

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57 Use each of the digits 8, 1, 4, 6 once to make the largest possible 4-digit number.

Answer: ___

(1)

---

58 Write these numbers in order, starting with the largest.

686,075, 711,782, 667,201, 702,406

Answer: ___

(1)

---

59 Use each of the digits 2, 7, 4, 9 once to make the smallest possible 4-digit number.

Answer: ___

(2)

---

60 Write these numbers in order, starting with the smallest.

139,801, 109,854, 134,788, 103,133

Answer: ___

(1)

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61 The table shows the number of books borrowed from a school library on four days.

Monday 34 | Tuesday 28 | Wednesday 45 | Thursday 19

Calculate how many more books were borrowed on Wednesday than on Thursday.

(2)

---

62 Write these numbers in order, starting with the largest.

612,854, 573,378, 600,433, 611,544

Answer: ___

(1)

---

63 Write these fractions in order, starting with the largest.

1/5, 5/10, 8/20

Answer: ___

(2)

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Mark scheme · 10.3-6 Reasoning Practice Paper 6: 2-hour Pack

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

Question 1

3/8 cao	B1

Answer: **3/8**

Question 2

7,000 and 1,000 seen	M1
6,000 cao	A1

Answer: **6,000**

Question 3

8,000 and 3,000 seen	M1
5,000 cao	A1

Answer: **5,000**

Question 4

method seen	M1
2/5 cao	A1

Answer: **2/5**

Question 5

< cao	B1

Answer: **<**

Question 6

138 div 16 = 8 remainder 10 (or equivalent division seen)	M1
recognises the remaining 10 pupils need an extra minibus (rounds up)	M1
9 (minibuses) cao	A1

Answer: **9 minibuses**

Question 7

< cao	B1

Answer: **<**

Question 8

common denominator seen	M1
> cao	A1

Answer: **>**

Question 9

1,259 cao	B1

Answer: **1,259**

Question 10

8,709 cao	B1

Answer: **8,709**

Question 11

834,340 cao	B1

Answer: **834,340**

Question 12

< cao	B1

Answer: **<**

Question 13

converts to a common denominator	M1
1/2 cao	A1

Answer: **1/2**

Question 14

< cao	B1

Answer: **<**

Question 15

common denominator seen	M1
< cao	A1

Answer: **<**

Question 16

divides numerator and denominator by a common factor	M1
1/2 cao	A1

Answer: **1/2**

Question 17

common denominator seen	M1
> cao	A1

Answer: **>**

Question 18

880 cao	B1

Answer: **880**

Question 19

< cao	B1

Answer: **<**

Question 20

converts to a common denominator	M1
1 1/6 or 7/6 cao	A1

Answer: **1 1/6**

Question 21

> cao	B1

Answer: **>**

Question 22

282,153 cao	B1

Answer: **282,153**

Question 23

subtraction method seen	M1
1,958 cao	A1

Answer: **1,958**

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Question 24

12,370 cao **B1**

Answer: **12,370**

Question 25

ninety-three thousand nine hundred and seventy-nine **B1**

cao

Answer: **ninety-three thousand nine hundred and seventy-nine**

Question 26

divides numerator and denominator by a common factor **M1**

2/5 cao **A1**

Answer: **2/5**

Question 27

converts to a common denominator **M1**

1 1/8 or 9/8 cao **A1**

Answer: **1 1/8**

Question 28

7 cao **B1**

Answer: **7**

Question 29

method seen **M1**

1/5 cao **A1**

Answer: **1/5**

Question 30

one hundred and fifteen thousand five hundred cao **B1**

Answer: **one hundred and fifteen thousand five hundred**

Question 31

566,862 cao **B1**

Answer: **566,862**

Question 32

A cao **B1**

Answer: **A**

Question 33

3.5+3.5+2+2 or 2 x (3.5+2) (method for perimeter) seen **M1**

11 (m) cao **A1**

Answer: **11m**

Question 34

converts to a common denominator **M1**

3 2/5 or 17/5 cao **A1**

Answer: **3 2/5**

Question 35

6,000 cao **B1**

Answer: **6,000**

Question 36

common denominator seen **M1**

> cao **A1**

Answer: **>**

Question 37

converts to a common denominator **M1**

one correct fraction seen **M1**

1 2/5 or 7/5 cao **A1**

Answer: **1 2/5**

Question 38

426,000 cao **B1**

Answer: **426,000**

Question 39

A cao **B1**

Answer: **A**

Question 40

8,000 and 4,000 seen **M1**

12,000 cao **A1**

Answer: **12,000**

Question 41

converts to a common denominator **M1**

2/3 cao **A1**

Answer: **2/3**

Question 42

1 cao **B1**

Answer: **1**

Question 43

2.35 + 1.20 (=3.55) or 5 - (2.35+1.20) seen **M1**

£1.45 oe cao **A1**

Answer: **£1.45**

Question 44

converts to a common denominator or decimals **M1**

1/10, 1/5, 3/4 cao **A1**

Answer: **1/10, 1/5, 3/4**

Question 45

method seen **M1**

1 1/6 or 7/6 cao **A1**

Answer: **1 1/6**

Question 46

5,000 and 2,000 seen **M1**

3,000 cao **A1**

Answer: **3,000**

Question 47

common denominator seen **M1**

> cao **A1**

Answer: **>**

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Question 48

9,000 cao **B1**

Answer: **9,000**

Question 49

> cao **B1**

Answer: **>**

Question 50

906,914 cao **B1**

Answer: **906,914**

Question 51

20,000 cao **B1**

Answer: **20,000**

Question 52

439,840 cao **B1**

Answer: **439,840**

Question 53

126,253 cao **B1**

Answer: **126,253**

Question 54

1 1/5 or 6/5 cao **B1**

Answer: **1 1/5**

Question 55

converts to a common denominator **M1**

5 1/8 or 41/8 cao **A1**

Answer: **5 1/8**

Question 56

839 cao **B1**

Answer: **839**

Question 57

8,641 cao **B1**

Answer: **8,641**

Question 58

711,782, 702,406, 686,075, 667,201 cao **B1**

Answer: **711,782, 702,406, 686,075, 667,201**

Question 59

digits placed in value order **M1**

2,479 cao **A1**

Answer: **2,479**

Question 60

103,133, 109,854, 134,788, 139,801 cao **B1**

Answer: **103,133, 109,854, 134,788, 139,801**

Question 61

45-19 seen (or equivalent subtraction identified) **M1**

26 cao **A1**

Answer: **26 books**

Question 62

612,854, 611,544, 600,433, 573,378 cao **B1**

Answer: **612,854, 611,544, 600,433, 573,378**

Question 63

converts to a common denominator or decimals **M1**

5/10, 8/20, 1/5 cao **A1**

Answer: **5/10, 8/20, 1/5**

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