10.3-8 Reasoning Practice Paper 8: 2-hour Pack

NATIONAL CURRICULUM KS2 National Curriculum Mathematics - Reasoning Practice Paper Framework · Calculators not allowed · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A rectangle is 3 cm wide. It is enlarged by scale factor 5.

How wide is the enlarged rectangle?

Answer: ___ cm

(1)

---

2 Write these in order, smallest first.

25%, 30%, 3/5

Answer: ___

(2)

---

3 Write the ratio 18:24 in its simplest form.

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

4 Dev has 18 stars. Dev gives 1/2 of them to a friend.

How many stars does Dev give to the friend?

Answer: ___

(1)

---

5 Write 21/10 as a mixed number.

Answer: ___

(2)

---

6 6 keyrings cost 360p.

How much do 3 keyrings cost? Give your answer in pounds.

Answer: £___

(2)

---

7 6 stickers cost 210p.

How much do 5 stickers cost? Give your answer in pounds.

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

8 Write these in order, smallest first.

60%, 0.3, 0.25

Answer: ___

(2)

---

9 What decimal is made from 7 ones, 7 tenths, 3 hundredths and 8 thousandths?

Answer: ___

(1)

---

10 A rectangle is 9 cm wide. It is enlarged by scale factor 7.

How wide is the enlarged rectangle?

Answer: ___ cm

(1)

---

11 Kofi and Freya share 132 football cards in the ratio 5:7.

How many football cards does Kofi get?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

12 A rectangle is 10 cm wide. It is enlarged by scale factor 4.

How wide is the enlarged rectangle?

Answer: ___ cm

(1)

---

13 4/8 of the cards in a jar is 12. How many cards are in the jar?

Answer: ___

(2)

---

14 1/2 of the grapes in a jar is 3. How many grapes are in the jar?

Answer: ___

(2)

---

15 Aaliyah has £84 in her savings account. She spends 3/7 of it on a new bicycle helmet and cycling gloves. Work out how much money she has left.

(2)

---

16 Work out 30% of 116 kg.

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

17 Decrease 28 by 10%.

Answer: ___

(1)

---

18 Oscar and Ella share 175 football cards in the ratio 5:2.

How many football cards does Oscar get?

Answer: ___

(2)

---

19 3/5 of the stars in a jar is 39. How many stars are in the jar?

Answer: ___

(2)

---

20 Reece eats 1/6 of a pie on Monday and 1/6 on Tuesday.

What fraction of the pie is left? Give your answer in its simplest form.

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

21 Callum pays a deposit of 25% on a kite that costs £200. The rest is paid later.

How much is paid later?

Answer: £___

(3)

---

22 Write 11/2 as a mixed number.

Answer: ___

(2)

---

23 On a map, 1 cm shows 5 km. Two towns are 11 cm apart on the map.

How far apart are the towns in real life?

Answer: ___ km

(1)

---

24 Tom buys a sandwich for £2.65 and a carton of juice for £1.35. He pays with a £5 note. Work out how much change he gets.

(2)

© Revision Library | revisionlibrary.co.uk

25 Increase 128 cm by 75%.

Answer: ___

(2)

---

26 Decrease 34 by 5%.

Answer: ___

(1)

---

27 A model of a ship is 10 cm long. The real ship is 300 times as long.

How long is the real ship in metres?

Answer: ___ m

(2)

---

28 2 stickers cost 58p.

How much do 10 stickers cost? Give your answer in pounds.

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

29 A bag weighs 9.3 kg. How many kg are there in 4 bags?

Answer: ___ kg

(2)

---

30 A recipe for pancakes for 5 people uses 150 g of flour.

How much flour is needed for 2 people?

Answer: ___ g

(2)

---

31 Write 0.05 as a fraction in its simplest form.

Answer: ___

(2)

---

32 A rectangle is 4 cm wide. It is enlarged by scale factor 10.

How wide is the enlarged rectangle?

Answer: ___ cm

(1)

© Revision Library | revisionlibrary.co.uk

33 A model of a ship is 10 cm long. The real ship is 1000 times as long.

How long is the real ship in metres?

Answer: ___ m

(2)

---

34 A train leaves Leeds station at 09:47 and arrives in York at 10:15. Work out how many minutes the journey takes.

(2)

---

35 In a sale, a bag costs £80. The price is reduced by 5%.

How much is the reduction?

Answer: £___

(2)

---

36 Write 6/20 in its simplest form.

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

37 What percentage of 40 is 22?

Answer: ___ %

(2)

---

38 9 folders cost 351p.

How much do 10 folders cost? Give your answer in pounds.

Answer: £___

(2)

---

39 Write these in order, smallest first.

0.75, 0.65, 30%

Answer: ___

(1)

---

40 3 bookmarks cost 207p.

How much do 4 bookmarks cost? Give your answer in pounds.

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

41 Write the ratio 7:35 in its simplest form.

Answer: ___

(2)

---

42 Write 0.04 as a percentage.

Answer: ___ %

(1)

---

43 A rectangular vegetable patch is 3.5m long and 2m wide. Priti wants to put edging all the way around the perimeter of the patch. Edging costs £1.20 per metre. Work out the total cost of the edging.

(2)

---

44 A recipe for scones for 5 people uses 225 g of butter.

How much butter is needed for 2 people?

Answer: ___ g

(2)

© Revision Library | revisionlibrary.co.uk

45 For every 1 fiction books there are 4 non-fiction books. There are 2 fiction books.

How many non-fiction books are there?

Answer: ___

(2)

---

46 Hassan eats 3/10 of a pie on Monday and 3/10 on Tuesday.

What fraction of the pie is left? Give your answer in its simplest form.

Answer: ___

(2)

---

47 Work out 25% of 72.

Answer: ___

(2)

---

48 Femi, Callum and Grace share 261 marbles in the ratio 4:1:4.

How many marbles does Femi get?

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

49 For every 6 apple trees there are 1 pear trees. There are 48 apple trees.

How many pear trees are there?

Answer: ___

(2)

---

50 Reece and Amira share £88 in the ratio 6:2.

How much does Reece get?

Answer: £___

(2)

---

51 Write 17/3 as a mixed number.

Answer: ___

(2)

---

52 A juice costs £13.66 and a pencil costs £2.74. Priya pays with a £20 note.

How much change does Priya get?

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

53 In a sale, a puzzle costs £115. The price is reduced by 5%.

What is the sale price?

Answer: £___

(3)

---

54 Work out 3 9/10 - 3 1/2.

Give your answer in its simplest form.

Answer: ___

(1)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 10.3-8 Reasoning Practice Paper 8: 2-hour Pack

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

Question 1

15 cm cao — B1

Answer: **15 cm**

Question 2

converts to a common form — M1

25%, 30%, 3/5 cao — A1

Answer: **25%, 30%, 3/5**

Question 3

3:4 cao — B1

Answer: **3:4**

Question 4

9 cao — B1

Answer: **9**

Question 5

method seen — M1

2 1/10 cao — A1

Answer: **2 1/10**

Question 6

360 divided by 6 = 60 seen — M1

£1.80 cao — A1

Answer: **£1.80**

Question 7

210 divided by 6 = 35 seen — M1

£1.75 cao — A1

Answer: **£1.75**

Question 8

converts to a common form — M1

0.25, 0.3, 60% cao — A1

Answer: **0.25, 0.3, 60%**

Question 9

7.738 cao — B1

Answer: **7.738**

Question 10

63 cm cao — B1

Answer: **63 cm**

Question 11

132 divided by 12 = 11 seen — M1

55 cao — A1

Answer: **55**

Question 12

40 cm cao — B1

Answer: **40 cm**

Question 13

12 / 4 = 3 seen — M1

24 cao — A1

Answer: **24**

Question 14

3 x 2 seen — M1

6 cao — A1

Answer: **6**

Question 15

84 / 7 = 12, then 12 x 3 = 36 (method to find 3/7 of 84) oe — M1

£48 cao — A1

Answer: **£48**

Question 16

10% or 1% found — M1

34.8 kg cao — A1

Answer: **34.8 kg**

Question 17

25.2 cao — B1

Answer: **25.2**

Question 18

175 divided by 7 = 25 seen — M1

125 cao — A1

Answer: **125**

Question 19

39 / 3 = 13 seen — M1

65 cao — A1

Answer: **65**

Question 20

2/6 eaten seen — M1

2/3 cao — A1

Answer: **2/3**

Question 21

deposit found — M1

subtraction — M1

£150 cao — A1

Answer: **£150**

Question 22

method seen — M1

5 1/2 cao — A1

Answer: **5 1/2**

© Revision Library | revisionlibrary.co.uk

Question 23

55 km cao — **B1**

Answer: **55 km**

Question 24

2.65 + 1.35 = 4.00 oe — **M1**

£1.00 cao — **A1**

Answer: **£1.00**

Question 25

percentage found — **M1**

224 cm cao — **A1**

Answer: **224 cm**

Question 26

32.3 cao — **B1**

Answer: **32.3**

Question 27

converts cm to m — **M1**

30 m cao — **A1**

Answer: **30 m**

Question 28

58 divided by 2 = 29 seen — **M1**

£2.90 cao — **A1**

Answer: **£2.90**

Question 29

multiplication seen — **M1**

37.2 kg cao — **A1**

Answer: **37.2 kg**

Question 30

finds the amount for 1 person or a scale factor — **M1**

60 g cao — **A1**

Answer: **60 g**

Question 31

method seen — **M1**

1/20 cao — **A1**

Answer: **1/20**

Question 32

40 cm cao — **B1**

Answer: **40 cm**

Question 33

converts cm to m — **M1**

100 m cao — **A1**

Answer: **100 m**

Question 34

splits the time into 09:47 to 10:00 (13 minutes) and 10:00 to 10:15 (15 minutes) oe — **M1**

28 minutes cao — **A1**

Answer: **28 minutes**

Question 35

method for the percentage — **M1**

£4 cao — **A1**

Answer: **£4**

Question 36

3/10 cao — **B1**

Answer: **3/10**

Question 37

fraction as a percentage — **M1**

55% cao — **A1**

Answer: **55%**

Question 38

351 divided by 9 = 39 seen — **M1**

£3.90 cao — **A1**

Answer: **£3.90**

Question 39

30%, 0.65, 0.75 cao — **B1**

Answer: **30%, 0.65, 0.75**

Question 40

207 divided by 3 = 69 seen — **M1**

£2.76 cao — **A1**

Answer: **£2.76**

Question 41

divides both by a common factor — **M1**

1:5 cao — **A1**

Answer: **1:5**

Question 42

4% cao — **B1**

Answer: **4%**

Question 43

perimeter = 2 x (3.5 + 2) = 11 (m) oe — **M1**

11 x 1.20 = £13.20, ft their perimeter — **A1 ft**

Answer: **£13.20**

Question 44

finds the amount for 1 person or a scale factor — **M1**

90 g cao — **A1**

Answer: **90 g**

Question 45

2 divided by 1 = 2 seen — **M1**

8 cao — **A1**

Answer: **8**

Question 46

6/10 eaten seen — **M1**

2/5 cao — **A1**

Answer: **2/5**

© Revision Library | revisionlibrary.co.uk

Question 47

10% or 1% found	M1
18 cao	A1

Answer: **18**

Question 48

116 cao	B1

Answer: **116**

Question 49

48 divided by 6 = 8 seen	M1
8 cao	A1

Answer: **8**

Question 50

88 divided by 8 = 11 seen	M1
£66 cao	A1

Answer: **£66**

Question 51

method seen	M1
5 2/3 cao	A1

Answer: **5 2/3**

Question 52

16.40 seen	M1
£3.60 cao	A1

Answer: **£3.60**

Question 53

reduction found	M1
subtracts from the original price	M1
£109.25 cao	A1

Answer: **£109.25**

Question 54

2/5 cao	B1

Answer: **2/5**

© Revision Library | revisionlibrary.co.uk