10.3-10 Reasoning Practice Paper 10: 30-minute Pack

NATIONAL CURRICULUM KS2 National Curriculum Mathematics - Reasoning Practice Paper Framework · Calculators not allowed · about 30 minutes

Total Marks

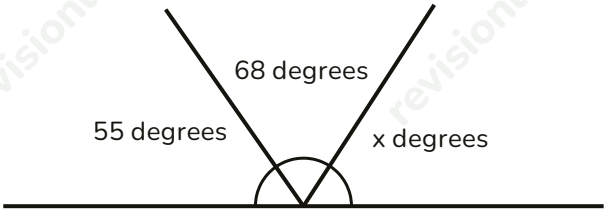
Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Rosie has £84. She spends 3/8 of it on a jacket, then spends 20% of what remains on a book. Work out how much money she has left.

(4)

2 Three angles meet at a point on a straight line, as shown in the diagram.



(a) Work out the size of the third angle, marked x. **(2)**

(b) State whether angle x is acute, right-angled or obtuse. Give a reason for your answer. **(1)**

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3 The rule for a sequence is: start at 19 and add 4 each time. The 1st term is 19.

What is the 14th term?

Answer: ___

(2)

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4 T = 2x + 4y.

Work out T when x = 2 and y = 7.

Answer: ___

(2)

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5 Mia has 16 more marbles than Chloe. Together they have 52 marbles.

How many marbles does Chloe have?

Answer: ___

(2)

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6 Matchsticks are used to make a row of pentagons joined side by side. One pentagon uses 5 sticks and each extra pentagon added needs 4 more sticks.

How many sticks are needed for 8 pentagons?

Answer: ___

(2)

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7 Quinn has m stamps. Zak has 5 times as many stamps as Quinn.

Write an expression for the number of stamps Zak has.

Answer: ___

(1)

8 3 magnets cost 222p.

How much do 9 magnets cost? Give your answer in pounds.

Answer: £___

(2)

9 a and b are positive whole numbers with a + b = 26.

How many different pairs (a, b) are there? Count (1, 25) and (25, 1) as different pairs.

Answer: ___

(2)

10 A shop sells 2 sweets for 49p and 5 sweets for 85p.

Which pack is better value for money? Write the number of sweets in the pack.

Answer: ___

(2)

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11 The sum of 5 consecutive numbers is 180.

What is the smallest of the 5 numbers?

Answer: ___

(2)

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12 ___ divided by 6 = 23

Answer: ___

(1)

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Mark scheme · 10.3-10 Reasoning Practice Paper 10: 30-minute Pack

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

Question 1

3/8 of 84 = 31.50 (84 / 8 = 10.50, 10.50 x 3 = 31.50) oe	**M1**
84 - 31.50 = 52.50, dependent on correct jacket cost	**dM1**
20% of 52.50 = 10.50, dependent on correct remaining amount	**dM1**
£42 cao (52.50 - 10.50)	**A1**

Answer: **£42**

Question 2

(a) 180 - 55 - 68 oe	**M1**
(a) 57 degrees cao	**A1**

(a) Answer: **57 degrees**

(b) acute, because 57 degrees is less than 90 degrees, ft their angle from part (a)	**B1**

(b) Answer: **Acute, because 57 degrees is less than 90 degrees**

Question 3

13 steps of 4 seen	**M1**
71 cao	**A1**

Answer: **71**

Question 4

2 x 2 or 4 x 7 seen	**M1**
32 cao	**A1**

Answer: **32**

Question 5

52 - 16 = 36 seen	**M1**
18 cao	**A1**

Answer: **18**

Question 6

7 extra shapes seen	**M1**
33 cao	**A1**

Answer: **33**

Question 7

5m cao	**B1**

Answer: **5m**

Question 8

222 divided by 3 = 74 seen	**M1**
£6.66 cao	**A1**

Answer: **£6.66**

Question 9

lists pairs systematically	**M1**
25 cao	**A1**

Answer: **25**

Question 10

finds the cost of one in each pack	**M1**
5 cao	**A1**

Answer: **5**

Question 11

uses the mean or tests numbers	**M1**
34 cao	**A1**

Answer: **34**

Question 12

138 cao	**B1**

Answer: **138**

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