10.3-9 Reasoning Practice Paper 9: 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 A community allotment society charges £45 per year for a full plot and £27 per year for a half plot. This year, 34 members have full plots and 19 members have half plots. The society also receives a one-off grant of £250 from the local council. Work out the total amount of money the society has this year from plot fees and the grant.

(3)

2 The table shows the number of raffle tickets sold by four form classes for a school charity event. Class 5W sold 42 tickets, class 5B sold 58 tickets, class 5G sold 37 tickets and class 5R sold 51 tickets. Each ticket costs £1.20. Work out how much more money the class with the most sales raised than the class with the fewest sales.

(3)

3 Three angles in a quadrilateral are 80, 118 and 118 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

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4 A school club survey is shown.

Boys: 27 chose Football, 12 chose Netball
Girls: 7 chose Football, 11 chose Netball

How many more pupils chose Football than Netball?

Answer: ___

(2)

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5 Points C and D are at (3, 3) and (3, 7). Each grid square is 1 unit wide.

How far is C from D?

Answer: ___ units

(1)

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6 Two angles in a triangle are 67 degrees and 26 degrees.

What is the third angle?

Answer: ___ degrees

(2)

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7 60 people answered a survey. 50 of them chose tea. In a pie chart this is shown as a sector.

What is the angle of the sector?

Answer: ___ degrees

(2)

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8 A line graph shows the water in a tank in litres at different times. The points on the graph are: 8:00 = 20, 9:00 = 19, 10:00 = 18, 11:00 = 22, 12:00 = 26, 13:00 = 29.

At what time was the value highest?

Answer: ___

(1)

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9 A machine at a bottling plant fills 8 bottles every 30 seconds. Working at this constant rate, work out how many bottles the machine fills in 6 minutes.

(2)

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10 Point B is at (2, 5). It is reflected in the mirror line x = 4.

What are the coordinates of the image of B?

Answer: (___, ___)

(2)

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11 A circle has a diameter of 24 cm. What is its radius?

Answer: ___ cm

(1)

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12 Three corners of a rectangle are (-4, -5), (2, -5) and (2, -2). The sides are parallel to the axes.

What are the coordinates of the fourth corner?

Answer: (___, ___)

(2)

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13 An angle measures 25 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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Mark scheme · 10.3-9 Reasoning Practice Paper 9: 30-minute Pack

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

Question 1

34 x 45 = 1530 oe	M1
19 x 27 = 513 oe	M1
£2293 cao (1530 + 513 + 250)	A1

Answer: **£2293**

Question 2

identifies 5B (58 tickets) as the most and 5G (37 tickets) as the fewest	M1
58 - 37 = 21 (tickets), dependent on correct identification	dM1
£25.20 cao	A1

Answer: **£25.20**

Question 3

316 seen	M1
44 degrees cao	A1

Answer: **44 degrees**

Question 4

both totals found	M1
11 cao	A1

Answer: **11**

Question 5

4 units cao	B1

Answer: **4 units**

Question 6

93 seen	M1
87 degrees cao	A1

Answer: **87 degrees**

Question 7

360 divided by the total	M1
300 degrees cao	A1

Answer: **300 degrees**

Question 8

13:00 cao	B1

Answer: **13:00**

Question 9

converts 6 minutes to 360 seconds and finds 360 / 30 = 12 oe	M1
96 cao	A1

Answer: **96 bottles**

Question 10

same distance from the mirror line	M1
(6, 5) cao	A1

Answer: **(6, 5)**

Question 11

12 cm cao	B1

Answer: **12 cm**

Question 12

one coordinate correct	M1
(-4, -2) cao	A1

Answer: **(-4, -2)**

Question 13

acute cao	B1

Answer: **acute**

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