10.5 Reasoning Practice Paper: 30-minute Pack

Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Jade has 22,136 cards. Jade puts 21,766 aside and shares the rest equally between 5 friends.

How many cards does each friend get?

Answer: ___

(2)

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2 T = 3x + 5y.

Work out T when x = 8 and y = 6.

Answer: ___

(2)

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3 A regular shape has perimeter P = 5s, where s is the side length.

Work out P when s = 5.

Answer: ___

(1)

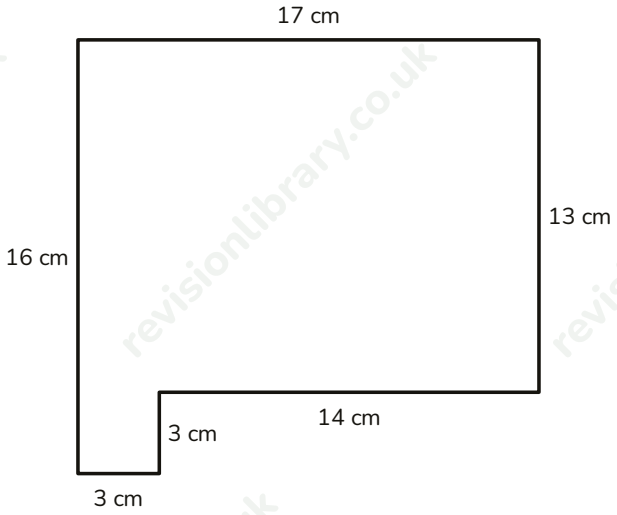
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4 An L-shaped floor has these sides in order around the shape: 17 cm, 13 cm, 14 cm, 3 cm, 3 cm, 16 cm.

What is the perimeter of the floor?

Answer: ___ cm

Diagram NOT accurately drawn



(1)

5 Each box has 19 spaces. There are 356 eggs to carry.

What is the smallest number of boxes needed?

Answer: ___

(2)

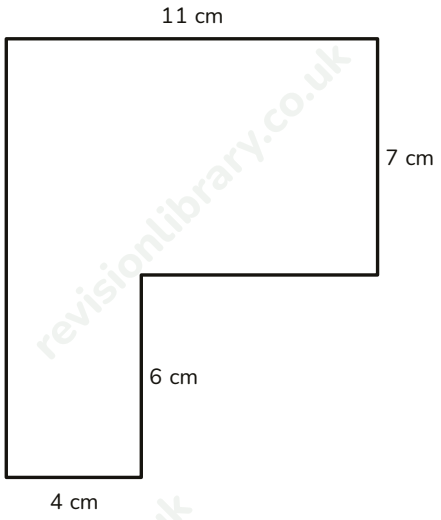
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6 An L-shape is made from two rectangles joined together. The first rectangle is 11 cm by 7 cm. The second is 4 cm by 6 cm.

What is the total area of the L-shape in square centimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

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7 A triangular garden has base 8 m and height 5 m. What is its area in square metres? Show your working.

(a) Find the area of the triangle. **(3)**

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8 A baker had 48 cupcakes. He packs them equally into boxes. Each box holds 6 cupcakes. How many boxes does he fill?

(a) Find how many boxes are filled. **(2)**

.....

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9 A square has sides of length 8 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



(1)

10 A shop sells 4 pencils for 85p and 8 pencils for 91p.

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

Answer: ___

(2)

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11 Here is a sequence: 9, 14, 19, 24, 29, ...

The nth term is of the form 5n + b. Find the nth term.

Answer: ___

(2)

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12 A shop sells pens at 35 p each. Kay buys 8 pens. How much does she pay in pounds and pence?

(a) Calculate the total cost. **(3)**

.....

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13 Write 3/20 as a percentage.

(a) Convert 3/20 to a percentage. **(2)**

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Mark scheme · 10.5 Reasoning Practice Paper: 30-minute Pack

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

Question 1

370 seen	M1
74 cao	A1

Answer: **74**

Question 2

3 x 8 or 5 x 6 seen	M1
54 cao	A1

Answer: **54**

Question 3

25 cao	B1

Answer: **25**

Question 4

66 cm cao	B1

Answer: **66 cm**

Question 5

356 / 19 = 18 remainder 14 seen	M1
19 cao	A1

Answer: **19**

Question 6

finds the area of each rectangle	M1
101 square centimetres cao	A1

Answer: **101 square centimetres**

Question 7

(a) Shows 1/2 x base x height or equivalent method	M1
(a) Computes 1/2 x 8 x 5 = 20 seen	M1
(a) 20 m² cao	A1

(a) Answer: **20 m²**

Question 8

(a) Shows 48 ÷ 6 or correct grouping	M1
(a) 8 cao	A1

(a) Answer: **8**

Question 9

64 square centimetres cao	B1

Answer: **64 square centimetres**

Question 10

finds the cost of one in each pack	M1
8 cao	A1

Answer: **8**

Question 11

finds the common difference	M1
5n + 4 cao	A1

Answer: **5n + 4**

Question 12

(a) Shows 35 x 8 or correct grouping method	M1
(a) Works out intermediate total, e.g. 280 p	M1
(a) 2.80 cao	A1

(a) Answer: **2.80**

Question 13

(a) Shows 3/20 = ?/100 or multiplies fraction to denominator 100	M1
(a) 15% cao	A1

(a) Answer: **15%**

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