10.3-7 Reasoning Practice Paper 7: 30-minute Pack

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

Total Marks

Name: _____ Date: ____ / ____ / _____

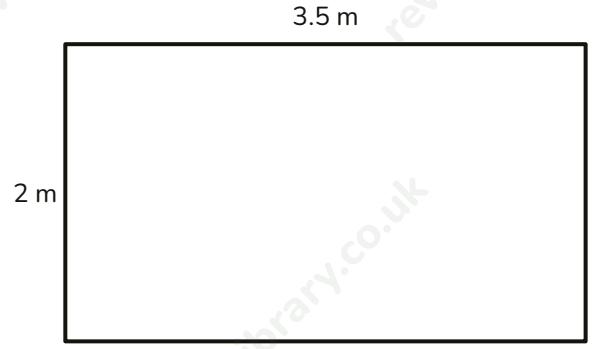
Answer ALL questions. Show all your working.

1 The nth term of a sequence is 4n + 3.

(a) Work out the 6th term of the sequence. **(1)**

(b) Nadia says, '100 is a term in this sequence.' Show that Nadia is wrong. **(3)**

2 A rectangular vegetable patch measures 3.5m by 2m. Priya wants to put a fence around the patch and cover the whole area with compost.



(a) Work out the perimeter of the patch. **(2)**

(b) Work out the area of the patch. **(1)**

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3 A rectangle is 21 mm long and 15 mm wide.

What is its area in square millimetres?

Answer: ___

(1)

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4 A regular decagon has sides of length 17 m.

What is its perimeter?

Answer: ___ m

(2)

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5 A balloon costs £4.91 and a sticker costs £7.36.

What is the total cost of the two items?

Answer: £___

(2)

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6 A shop sells 6 juice packs for £0.85 and 4 juice packs for £1.22.

Which option costs less for each pack? Write 6 or 4 for the number of packs.

Answer: ___

(2)

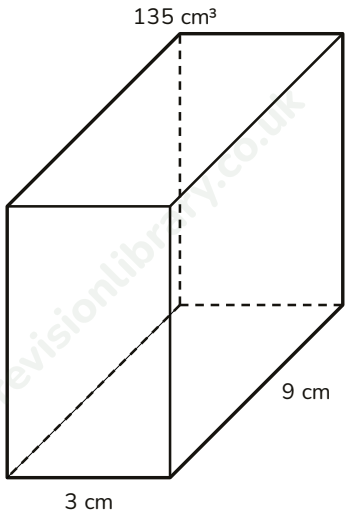
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7 A cuboid has a volume of 135 cm cubed. Its length is 3 cm and its width is 9 cm.

What is its height?

Answer: ___ cm

Diagram NOT accurately drawn



(2)

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8 Convert 128 mm to cm.

Answer: ___ cm

(1)

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9 This is a clock. The hour hand is between 3 and 4. The minute hand points exactly to 2.

What time does the clock show? Write your answer as a digital time.

Answer: ___

(1)

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10 This is a clock. The hour hand is between 8 and 9. The minute hand points exactly to 6.

What time does the clock show? Write your answer in words, using past or to.

Answer: ___

(1)

11 I am a quadrilateral. I have 0 pairs of parallel sides and 0 right angles.

What shape am I?

Answer: ___

(1)

12 Which is bigger, 3.3 m or 197 cm?

Answer: ___

(1)

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13 A scale in ml has big marks every 4 ml, with 4 equal small divisions between each big mark. The first big mark is 8. The pointer is 3 small divisions after the second big mark.

What is the reading?

Answer: ___ ml

(2)

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14 Use 1 foot = 30 cm.

A strip of card is 12 feet long. How long is it in cm?

Answer: ___ cm

(2)

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Mark scheme · 10.3-7 Reasoning Practice Paper 7: 30-minute Pack

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

Question 1

(a) 27 cao — **B1**

(a) Answer: **27**

(b) forms 4n + 3 = 100 oe — **M1**

(b) solves to n = 24.25 (or equivalent, e.g. shows 100 - 3 = 97 is not a multiple of 4) — **M1**

(b) cso; correct conclusion that n is not a whole number, so 100 cannot be a term — **A1**

(b) Answer: **100 is not a term, since n = 24.25 is not a whole number**

Question 2

(a) 3.5 + 2 + 3.5 + 2 oe — **M1**

(a) 11m cao — **A1**

(a) Answer: **11m**

(b) 7 sq m cao — **B1**

(b) Answer: **7 sq m**

Question 3

315 square millimetres cao — **B1**

Answer: **315 square millimetres**

Question 4

10 x 17 — **M1**

170 m cao — **A1**

Answer: **170 m**

Question 5

addition of pounds and pence — **M1**

£12.27 cao — **A1**

Answer: **£12.27**

Question 6

works out a cost per pack for each option — **M1**

6 cao — **A1**

Answer: **6**

Question 7

3 x 9 = 27 seen — **M1**

5 cm cao — **A1**

Answer: **5 cm**

Question 8

12.8 cm cao — **B1**

Answer: **12.8 cm**

Question 9

3:10 cao — **B1**

Answer: **3:10**

Question 10

half past 8 cao — **B1**

Answer: **half past 8**

Question 11

any quadrilateral with no parallel sides and no right angles, for example a kite or an irregular quadrilateral — **B1**

Answer: **A kite or another quadrilateral with no parallel sides and no right angles**

Question 12

3.3 m cao — **B1**

Answer: **3.3 m**

Question 13

size of a small division found — **M1**

15 ml cao — **A1**

Answer: **15 ml**

Question 14

multiplies by the conversion — **M1**

360 cm cao — **A1**

Answer: **360 cm**

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