10.3-7 Reasoning Practice Paper 7: 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 Hana buys 2 comics at £1.94 each, 2 rulers at £3.37 each and 5 kites at £3.94 each. Hana pays with £35.

How much change does Hana get?

Answer: £___

(3)

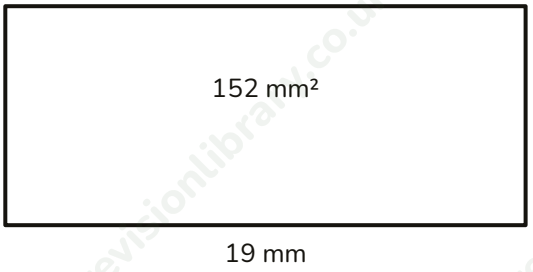
---

2 A rectangle has an area of 152 square millimetres. Its length is 19 mm.

What is its width?

Answer: ___ mm

Diagram NOT accurately drawn



(2)

© Revision Library | revisionlibrary.co.uk

3 A rectangle measures 7 m by 11 m. A smaller rectangle 2 m by 7 m is cut out of one corner.

What is the area of the shape that is left, in square metres?

Answer: ___

(3)

---

4 Jack buys 3 T-shirts at £1.92 each, 3 lollies at £3.87 each and 3 scarves at £2.99 each. Jack pays with £30.

How much change does Jack get?

Answer: £___

(3)

© Revision Library | revisionlibrary.co.uk

5 Convert 8,210 cm to m.

Answer: ___ m

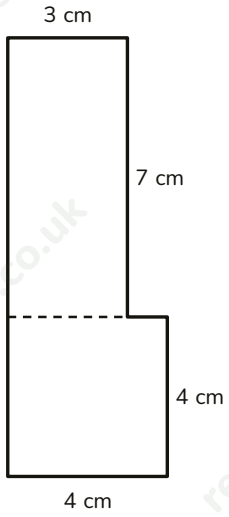
(1)

---

6 An L-shape is made from two rectangles joined together. The first rectangle is 4 cm by 4 cm. The second is 3 cm by 7 cm.

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

Answer: ___



(2)

© Revision Library | revisionlibrary.co.uk

7 A square has sides of length 16 m.

What is its perimeter?

Answer: ___ m

Diagram NOT accurately drawn



(1)

8 Kofi buys 2 scarves at £2.74 each and 3 rulers at £3.59 each. Kofi pays with £20.

How much change does Kofi get?

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

9 The 1st of the month is a Friday.

What day of the week is the 28th?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

10 Part of a train timetable is shown.

Fenwick: 06:40
Grange: 06:53
Hollin: 07:33
Bridgton: 07:47

How many minutes does the train take to travel from Fenwick to Hollin?

Answer: ___ minutes

(2)

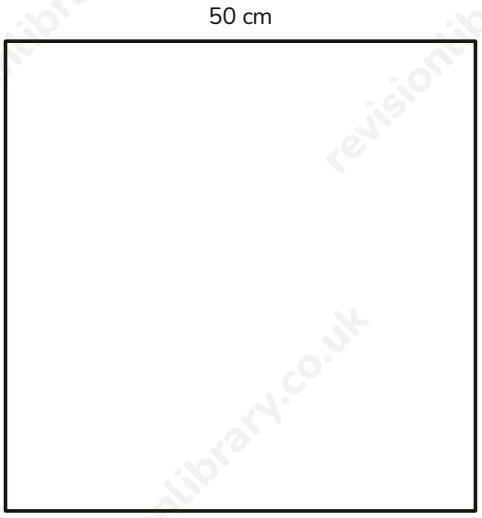
---

11 A square has sides of length 50 cm.

What is its perimeter?

Answer: ___ cm

Diagram NOT accurately drawn



(1)

© Revision Library | revisionlibrary.co.uk

12 A square has sides of length 17 m.

What is its perimeter?

Answer: ___ m

Diagram NOT accurately drawn



(1)

13 The 1st of the month is a Thursday.

What day of the week is the 10th?

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

14 A film starts at 13:24 and takes 3 hours 40 minutes.

What time does it finish? Write your answer as a 24-hour clock time.

Answer: ___

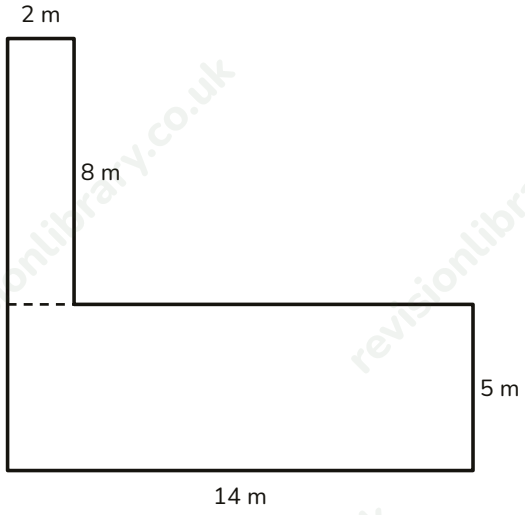
(2)

---

15 An L-shape is made from two rectangles joined together. The first rectangle is 14 m by 5 m. The second is 2 m by 8 m.

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

Answer: ___



(3)

© Revision Library | revisionlibrary.co.uk

16 Convert 27 cm to mm.

Answer: ___ mm

(1)

---

17 An isosceles triangle has an angle of 90 degrees between its two equal sides.

What size is each of the other two angles?

Answer: ___ degrees

(2)

---

18 The 1st of the month is a Thursday.

What day of the week is the 28th?

Answer: ___

(2)

---

19 A tank is 10 cm long, 40 cm wide and 20 cm high.

How many litres of water does it hold when full? (1 litre = 1,000 cm cubed.)

Answer: ___ litres

(2)

© Revision Library | revisionlibrary.co.uk

20 Write 3:25 pm as a 24-hour clock time.

Answer: ___

(1)

---

21 Convert 83,800 mm to m.

Answer: ___ m

(1)

---

22 A coach leaves at 18:00 and takes 1 hour 25 minutes.

What time does it finish? Write your answer as a 24-hour clock time.

Answer: ___

(2)

---

23 An angle measures 159 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

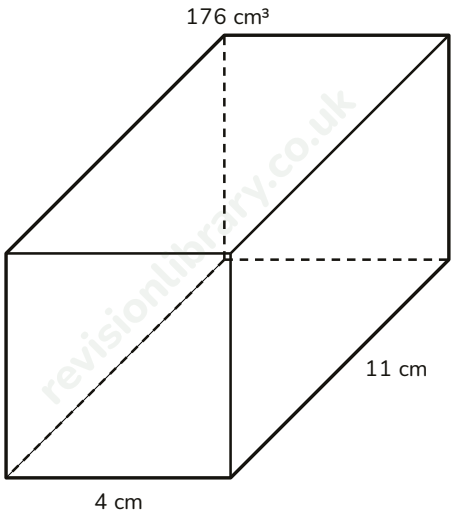
© Revision Library | revisionlibrary.co.uk

24 A cuboid has a volume of 176 cm cubed. Its length is 4 cm and its width is 11 cm.

What is its height?

Answer: ___ cm

Diagram NOT accurately drawn



(2)

25 Part of a train timetable is shown.

Grange: 12:30
Dunmere: 13:10
Fenwick: 13:47
Hollin: 14:07

Yusuf arrives at Dunmere station at 12:53.

How many minutes must they wait for the train?

Answer: ___ minutes

(2)

© Revision Library | revisionlibrary.co.uk

26 Oliver buys a comic for £2.35 and a magazine for £3.89. He pays with a £10 note. How much change does he get?

(2)

---

27 A rectangle is 29 m long and 9 m wide.

What is its area in square metres?

Answer: ___

(1)

---

28 An angle on a diagram is 305 degrees. What is the size of the angle needed to complete a full turn?

Answer: ___ degrees

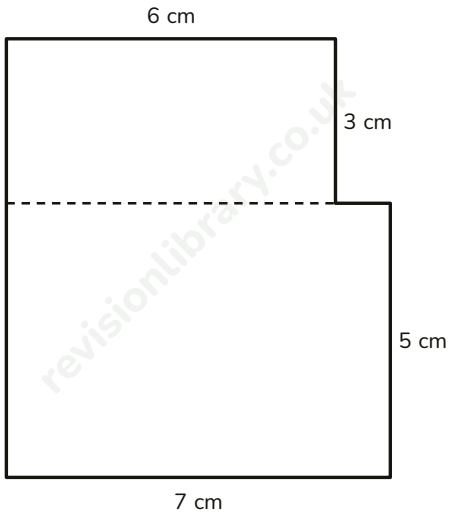
(1)

© Revision Library | revisionlibrary.co.uk

29 An L-shape is made from two rectangles joined together. The first rectangle is 6 cm by 3 cm. The second is 7 cm by 5 cm.

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

Answer: ___



(3)

---

30 A regular decagon has all sides equal. Each side is 7 cm.

What is its perimeter?

Answer: ___ cm

(1)

© Revision Library | revisionlibrary.co.uk

31 A school trip starts on 21 March and finishes on 25 March.

How many days is it from the start date to the finish date?

Answer: ___ days

(1)

---

32 A square has sides of length 30 km.

What is its perimeter?

Answer: ___ km

Diagram NOT accurately drawn



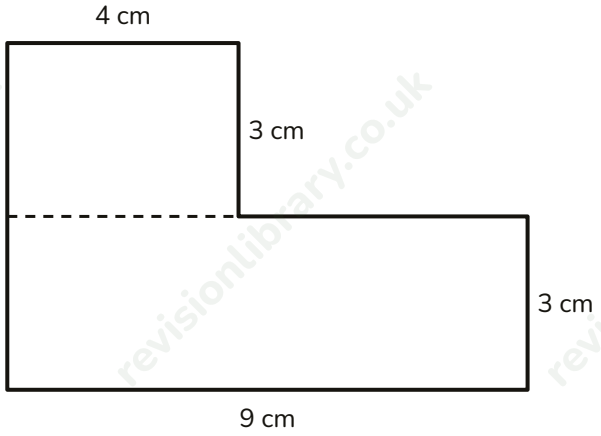
(1)

© Revision Library | revisionlibrary.co.uk

33 An L-shape is made from two rectangles joined together. The first rectangle is 9 cm by 3 cm. The second is 4 cm by 3 cm.

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

Answer: ___



(2)

---

34 A train leaves Cardiff at 09:47 and arrives in Bristol at 10:22. How many minutes does the journey take?

(2)

---

35 A pen costs £10.21 and a sandwich costs £7.96.

What is the total cost of the two items?

Answer: £___

(2)

© Revision Library | revisionlibrary.co.uk

36 A pencil costs £17.89 and a balloon costs £4.74.

What is the total cost of the two items?

Answer: £___

(1)

---

37 An angle measures 338 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

38 Convert 36.9 m to mm.

Answer: ___ mm

(1)

---

39 Two angles in a triangle are 64 degrees and 65 degrees.

What is the third angle?

Answer: ___ degrees

(2)

© Revision Library | revisionlibrary.co.uk

40 Yusuf buys 1 balloon at £2.19 each, 5 rulers at £2.86 each and 1 kite at £2.40 each. Yusuf pays with £20.

How much change does Yusuf get?

Answer: £___

(3)

---

41 Four angles meet at a point and add up to 360 degrees. Three of the angles are 82, 102 and 85 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

---

42 A school is ordering pencils for a new term. Pencils come in packs of 12 and cost £1.45 per pack. The school needs at least 250 pencils. Work out the total cost of buying enough packs.

(3)

© Revision Library | revisionlibrary.co.uk

43 A rectangle is 15 cm long and 25 cm wide.

What is its perimeter?

Answer: ___ cm

(2)

---

44 The 1st of the month is a Wednesday.

What day of the week is the 18th?

Answer: ___

(1)

---

45 Two angles in a triangle are 62 degrees and 92 degrees.

What is the third angle?

Answer: ___ degrees

(2)

---

46 A train leaves at 14:49 and arrives at 19:29.

How many minutes does it take?

Answer: ___ minutes

(1)

© Revision Library | revisionlibrary.co.uk

47 George buys 1 notebook at £2.57 each and 2 scarves at £1.96 each. George pays with £10.

How much change does George get?

Answer: £___

(2)

---

48 This is a clock. The hour hand is between 12 and 1. The minute hand points exactly to 5.

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

Answer: ___

(1)

---

49 A plank of wood is 2.4m long. Freya cuts off a piece 65cm long. How many centimetres of the plank remain?

(2)

---

50 £1 = 10 francs.

A toy costs 490 francs. How much is that in pounds?

Answer: £___

(1)

© Revision Library | revisionlibrary.co.uk

51 A ribbon is 4 m long. Ivan cuts it into pieces that are each 50 cm long.

How many pieces does Ivan cut?

Answer: ___

(2)

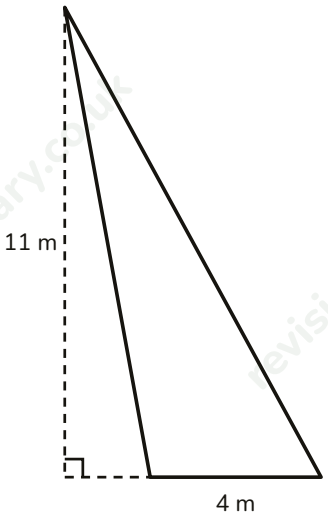
---

52 A triangle has a base of 4 m and a perpendicular height of 11 m.

What is its area in square metres?

Answer: ___

Diagram NOT accurately drawn



(1)

---

53 Convert 97,900 g to kg.

Answer: ___ kg

(1)

© Revision Library | revisionlibrary.co.uk

54 Part of a train timetable is shown.

Ashby: 14:05
Bridgton: 14:34
Hollin: 14:59
Eastleigh: 15:07

How many minutes does the train take to travel from Ashby to Eastleigh?

Answer: ___ minutes

(2)

---

55 A train leaves at 10:42 and takes 5 hours 19 minutes.

What time does it finish? Write your answer as a 24-hour clock time.

Answer: ___

(2)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 10.3-7 Reasoning Practice Paper 7: 2-hour Pack

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

Question 1

3.88 seen	M1
total 30.32 seen	M1
£4.68 cao	A1

Answer: **£4.68**

Question 2

divides area by length	M1
8 mm cao	A1

Answer: **8 mm**

Question 3

finds both areas	M1
subtracts	M1
63 square metres cao	A1

Answer: **63 square metres**

Question 4

5.76 seen	M1
total 26.34 seen	M1
£3.66 cao	A1

Answer: **£3.66**

Question 5

82.1 m cao	B1

Answer: **82.1 m**

Question 6

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

Answer: **37 square centimetres**

Question 7

64 m cao	B1

Answer: **64 m**

Question 8

5.48 seen	M1
£3.75 cao	A1

Answer: **£3.75**

Question 9

counts in 7s	M1
Thursday cao	A1

Answer: **Thursday**

Question 10

finds the difference between the two times (counting on or subtracting)	M1
53 minutes cao	A1

Answer: **53 minutes**

Question 11

200 cm cao	B1

Answer: **200 cm**

Question 12

68 m cao	B1

Answer: **68 m**

Question 13

counts in 7s	M1
Saturday cao	A1

Answer: **Saturday**

Question 14

adds hours then minutes	M1
17:04 cao	A1

Answer: **17:04**

Question 15

finds the area of each rectangle	M1
adds the two areas	M1
86 square metres cao	A1

Answer: **86 square metres**

Question 16

270 mm cao	B1

Answer: **270 mm**

Question 17

180 - 90 = 90 degrees for the two equal angles together oe	M1
90 / 2 = 45 degrees each cao	A1

Answer: **45 degrees**

Question 18

counts in 7s	M1
Wednesday cao	A1

Answer: **Wednesday**

Question 19

8,000 cm cubed seen	M1
8 litres cao	A1

Answer: **8 litres**

Question 20

15:25 cao	B1

Answer: **15:25**

© Revision Library | revisionlibrary.co.uk

Question 21

83.8 m cao — **B1**

Answer: **83.8 m**

Question 22

adds hours then minutes — **M1**

19:25 cao — **A1**

Answer: **19:25**

Question 23

obtuse cao — **B1**

Answer: **obtuse**

Question 24

4 x 11 = 44 seen — **M1**

4 cm cao — **A1**

Answer: **4 cm**

Question 25

finds the wait between arriving and the departure time (counting on or subtracting) — **M1**

17 minutes cao — **A1**

Answer: **17 minutes**

Question 26

2.35 + 3.89 = 6.24 oe — **M1**

£3.76 cao — **A1**

Answer: **£3.76**

Question 27

261 square metres cao — **B1**

Answer: **261 square metres**

Question 28

55 degrees cao — **B1**

Answer: **55 degrees**

Question 29

finds the area of each rectangle — **M1**

adds the two areas — **M1**

53 square centimetres cao — **A1**

Answer: **53 square centimetres**

Question 30

70 cm cao — **B1**

Answer: **70 cm**

Question 31

4 days cao — **B1**

Answer: **4 days**

Question 32

120 km cao — **B1**

Answer: **120 km**

Question 33

finds the area of each rectangle — **M1**

39 square centimetres cao — **A1**

Answer: **39 square centimetres**

Question 34

splits the time into 09:47 to 10:00 (13 minutes) and 10:00 to 10:22 (22 minutes) oe — **M1**

35 minutes cao — **A1**

Answer: **35 minutes**

Question 35

addition of pounds and pence — **M1**

£18.17 cao — **A1**

Answer: **£18.17**

Question 36

£22.63 cao — **B1**

Answer: **£22.63**

Question 37

reflex cao — **B1**

Answer: **reflex**

Question 38

36,900 mm cao — **B1**

Answer: **36,900 mm**

Question 39

129 seen — **M1**

51 degrees cao — **A1**

Answer: **51 degrees**

Question 40

1 x £2.19 + 5 x £2.86 + 1 x £2.40 = £18.89 total cost oe — **M1**

£20 - £18.89 oe — **M1**

£1.11 cao — **A1**

Answer: **£1.11**

Question 41

269 seen — **M1**

91 degrees cao — **A1**

Answer: **91 degrees**

Question 42

250 / 12 = 20.8... (or 20 remainder 10) oe — **M1**

rounds up to 21 packs (enough for 250 pencils), dependent on M1 — **dM1**

£30.45 cao — **A1**

Answer: **£30.45 (21 packs)**

Question 43

adds all four sides or doubles l + w — **M1**

80 cm cao — **A1**

Answer: **80 cm**

Question 44

Saturday cao — **B1**

Answer: **Saturday**

© Revision Library | revisionlibrary.co.uk

Question 45

154 seen	M1
26 degrees cao	A1

Answer: **26 degrees**

Question 46

280 minutes cao	B1

Answer: **280 minutes**

Question 47

1 x £2.57 + 2 x £1.96 = £6.49 total cost oe	M1
£3.51 cao	A1

Answer: **£3.51**

Question 48

12:25 cao	B1

Answer: **12:25**

Question 49

2.4m = 240cm oe	M1
175cm cao	A1

Answer: **175cm**

Question 50

£49 cao	B1

Answer: **£49**

Question 51

4 m = 400 cm seen	M1
8 cao	A1

Answer: **8**

Question 52

22 square metres cao	B1

Answer: **22 square metres**

Question 53

97.9 kg cao	B1

Answer: **97.9 kg**

Question 54

finds the difference between the two times (counting on or subtracting)	M1
62 minutes cao	A1

Answer: **62 minutes**

Question 55

adds hours then minutes	M1
16:01 cao	A1

Answer: **16:01**

© Revision Library | revisionlibrary.co.uk