7.9 Perimeter, Area and Volume: 2-hour Pack

Calculators not allowed · about 120 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

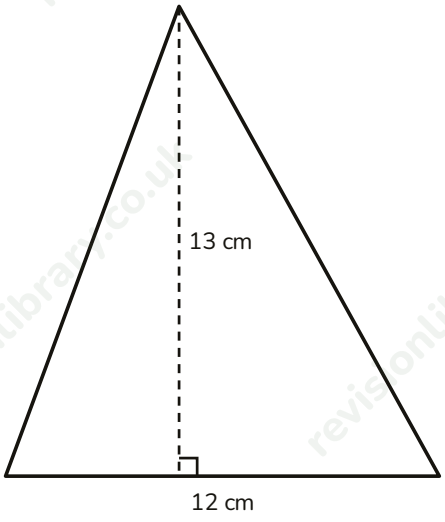
Answer ALL questions. Show all your working.

1 A triangle has a base of 12 cm and a perpendicular height of 13 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

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2 A tank is 20 cm long, 20 cm wide and 25 cm high.

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

Answer: ___ litres

(2)

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3 A rectangle measures 7 m by 5 m. A smaller rectangle 2 m by 2 m is cut out of one corner.

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

Answer: ___

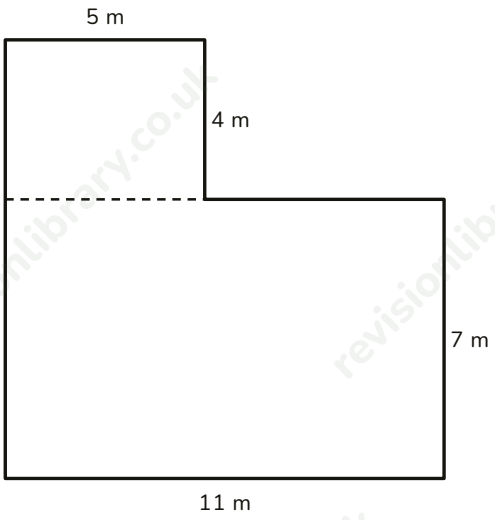
(2)

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4 An L-shape is made from two rectangles joined together. The first rectangle is 11 m by 7 m. The second is 5 m by 4 m.

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

Answer: ___



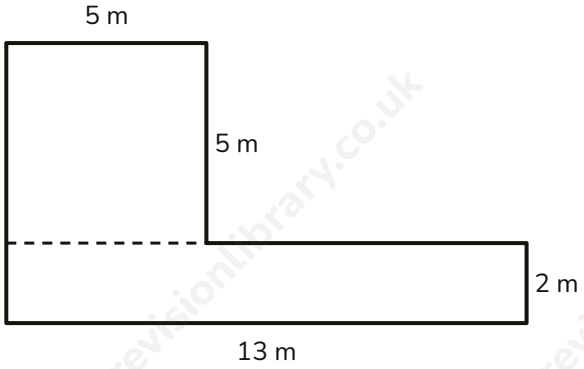
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5 An L-shape is made from two rectangles joined together. The first rectangle is 13 m by 2 m. The second is 5 m by 5 m.

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

Answer: ___



(2)

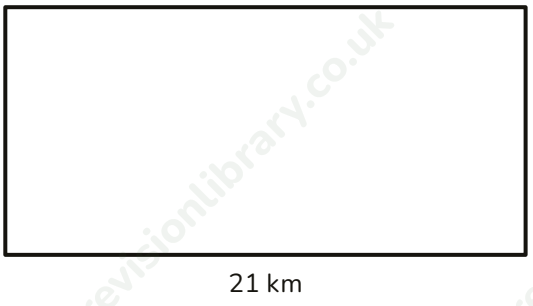
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6 A rectangle has a perimeter of 82 km. Its length is 21 km.

What is its width?

Answer: ___ km

Diagram NOT accurately drawn



Perimeter = 82 km

(2)

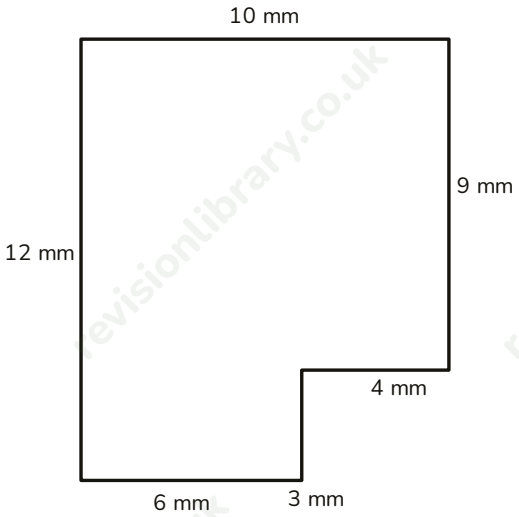
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7 An L-shaped floor has these sides in order around the shape: 10 mm, 9 mm, 4 mm, 3 mm, 6 mm, 12 mm.

What is the perimeter of the floor?

Answer: ___ mm

Diagram NOT accurately drawn



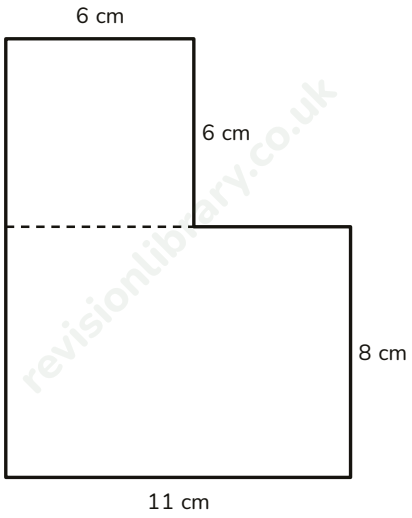
(2)

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8 An L-shape is made from two rectangles joined together. The first rectangle is 11 cm by 8 cm. The second is 6 cm by 6 cm.

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

Answer: ___



(3)

---

9 A rectangle is 8 km long and 25 km wide.

What is its perimeter?

Answer: ___ km

(1)

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10 A rectangle is 10 mm long and 14 mm wide.

What is its area in square millimetres?

Answer: ___

(1)

---

11 A rectangle is 40 m long and 18 m wide.

What is its perimeter?

Answer: ___ m

(2)

---

12 A square has sides of length 38 m.

What is its perimeter?

Answer: ___ m

Diagram NOT accurately drawn



(1)

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13 Bella buys a bag of potatoes weighing 1.5 kg and a bag of carrots weighing 746 g.

What is the total mass in kg?

Answer: ___ kg

(2)

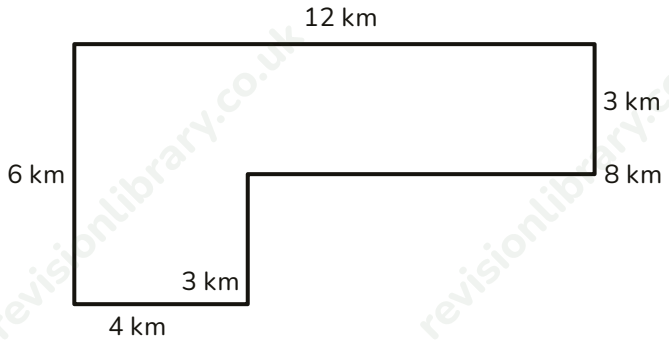
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14 An L-shaped floor has these sides in order around the shape: 12 km, 3 km, 8 km, 3 km, 4 km, 6 km.

What is the perimeter of the floor?

Answer: ___ km

Diagram NOT accurately drawn



(2)

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15 A tank is 10 cm long, 40 cm wide and 25 cm high.

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

Answer: ___ litres

(2)

---

16 A square has sides of length 7 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



7 cm

(1)

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17 A rectangle has area 48 cm² and one side is 6 cm. Work out the length of the other side.

Diagram NOT accurately drawn



(2)

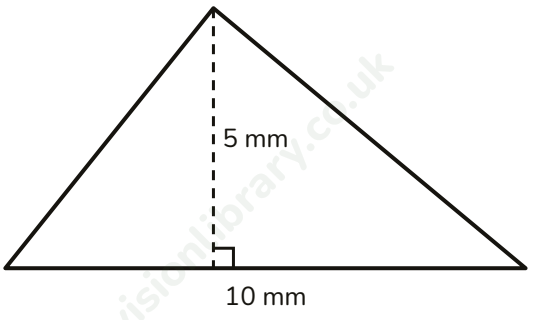
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18 A triangle has a base of 10 mm and a perpendicular height of 5 mm.

What is its area in square millimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

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19 A rectangle has an area of 110 square metres. Its length is 22 m.

What is its width?

Answer: ___ m

Diagram NOT accurately drawn



22 m

Area = 110 square metres

(1)

---

20 A square has sides of length 27 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



27 cm

(1)

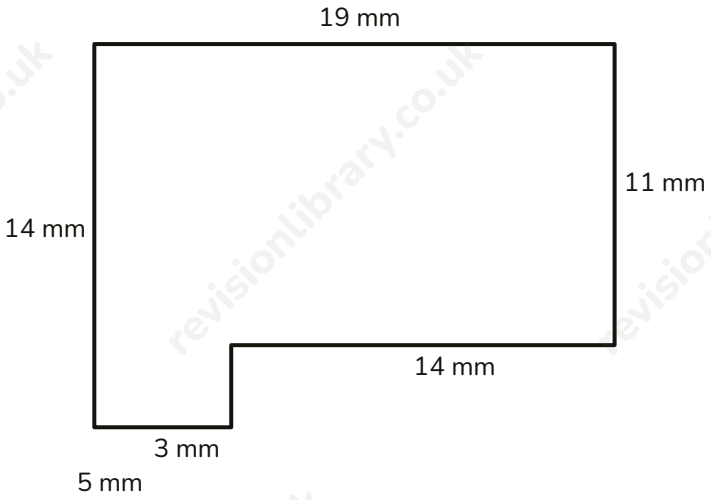
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21 An L-shaped floor has these sides in order around the shape: 19 mm, 11 mm, 14 mm, 3 mm, 5 mm, 14 mm.

What is the perimeter of the floor?

Answer: ___ mm

Diagram NOT accurately drawn



(2)

22 A rectangle is 30 m long and 20 m wide.

What is its perimeter?

Answer: ___ m

(2)

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23 Mateo buys a bag of potatoes weighing 3.1 kg and a bag of carrots weighing 445 g.

What is the total mass in kg?

Answer: ___ kg

(2)

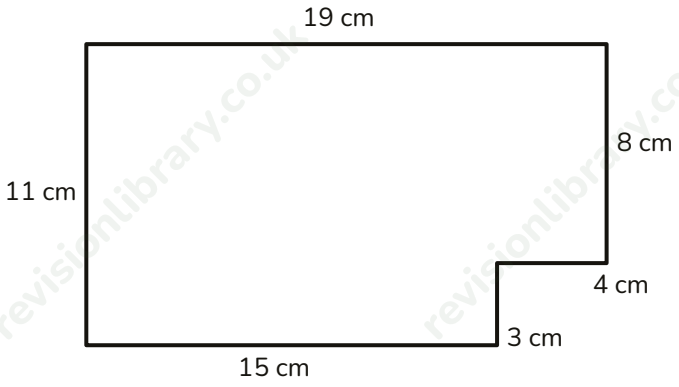
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24 An L-shaped floor has these sides in order around the shape: 19 cm, 8 cm, 4 cm, 3 cm, 15 cm, 11 cm.

What is the perimeter of the floor?

Answer: ___ cm

Diagram NOT accurately drawn



(2)

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25 A rectangle is 14 mm long and 24 mm wide.

What is its perimeter?

Answer: ___ mm

(2)

---

26 A border around a square flower bed is 1 m wide. The outside edge of the border makes a larger square 8 m by 8 m. What is the area of the flower bed (the inner square)?

(2)

---

27 Ella buys a bag of potatoes weighing 2.8 kg and a bag of carrots weighing 538 g.

What is the total mass in kg?

Answer: ___ kg

(2)

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28 A rectangle has an area of 45 square metres. Its length is 3 m.

What is its width?

Answer: ___ m

Diagram NOT accurately drawn



Area = 45 m²

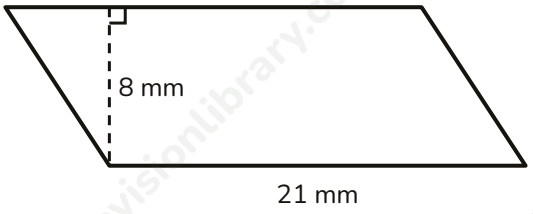
(1)

29 A parallelogram has a base of 21 mm and a perpendicular height of 8 mm.

What is its area in square millimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

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30 A bottle holds 1,000 ml of squash. Hassan fills glasses that each hold 250 ml.

How many glasses can be filled?

Answer: ___

(1)

---

31 A tank is 25 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)

---

32 Ella buys a bag of potatoes weighing 3.4 kg and a bag of carrots weighing 589 g.

What is the total mass in kg?

Answer: ___ kg

(2)

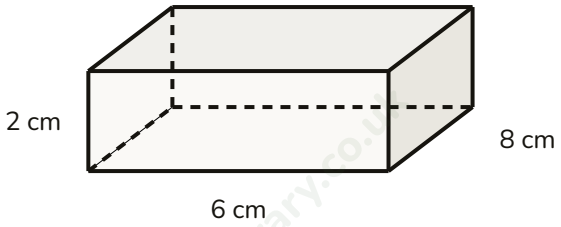
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33 A box is 6 cm long, 8 cm wide and 2 cm high. It is filled with 1 cm cubes.

How many cubes are needed to fill the box?

Answer: ___

Diagram NOT accurately drawn



(1)

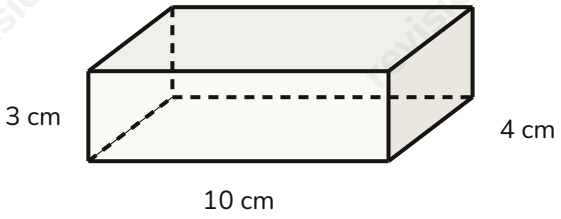
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34 A cuboid measures 10 cm by 4 cm by 3 cm.

What is its volume in cubic centimetres?

Answer: ___ cm cubed

Diagram NOT accurately drawn



(2)

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35 A tank is 50 cm long, 10 cm wide and 40 cm high.

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

Answer: ___ litres

(2)

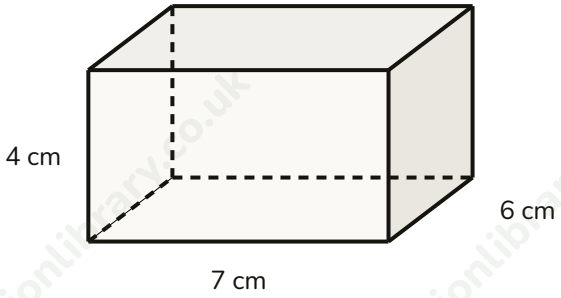
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36 A box is 7 cm long, 6 cm wide and 4 cm high. It is filled with 1 cm cubes.

How many cubes are needed to fill the box?

Answer: ___

Diagram NOT accurately drawn



(2)

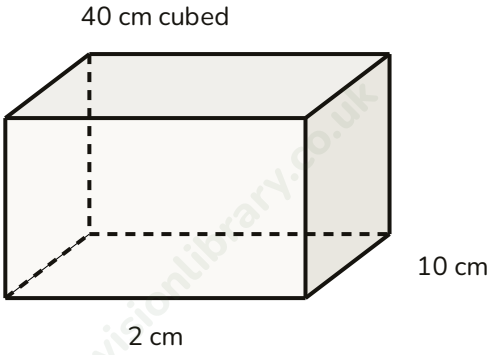
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37 A cuboid has a volume of 40 cm cubed. Its length is 2 cm and its width is 10 cm.

What is its height?

Answer: ___ cm

Diagram NOT accurately drawn



(2)

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38 A bottle holds 600 ml of squash. Tom fills glasses that each hold 150 ml.

How many glasses can be filled?

Answer: ___

(1)

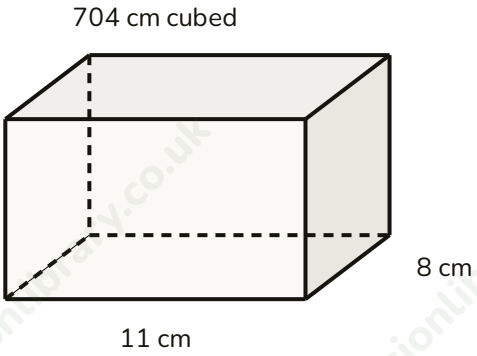
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39 A cuboid has a volume of 704 cm cubed. Its length is 11 cm and its width is 8 cm.

What is its height?

Answer: ___ cm

Diagram NOT accurately drawn



(2)

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40 A square has sides of length 5 m.

What is its area in square metres?

Answer: ___

Diagram NOT accurately drawn



5 m

(1)

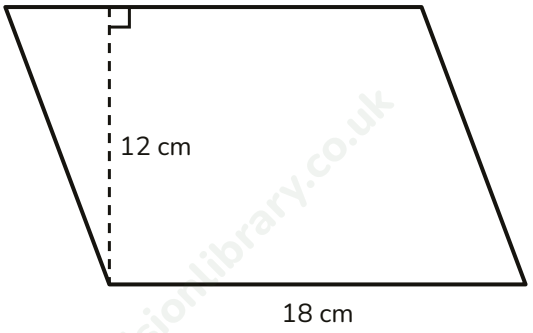
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41 A parallelogram has a base of 18 cm and a perpendicular height of 12 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

---

42 A rectangle has a perimeter of 92 m. Its length is 39 m.

What is its width?

Answer: ___ m

Diagram NOT accurately drawn



Perimeter = 92 m

(2)

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43 A rectangle has a perimeter of 78 m. Its length is 25 m.

What is its width?

Answer: ___ m

Diagram NOT accurately drawn



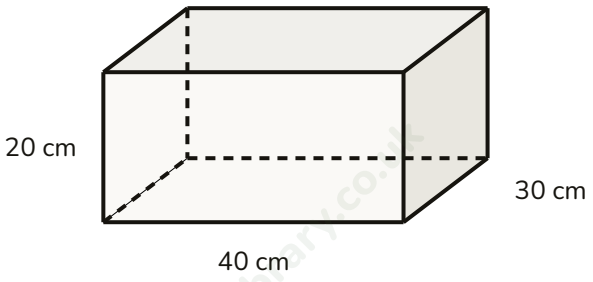
Perimeter = 78 m

(2)

---

44 A storage box is 40 cm by 30 cm by 20 cm. A small cube has side 10 cm. What is the largest number of small cubes that can fit into the box without breaking them?

Diagram NOT accurately drawn



(2)

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45 A rectangle has an area of 28 square metres. Its length is 7 m.

What is its width?

Answer: ___ m

Diagram NOT accurately drawn



7 m

Area = 28 m²

(2)

---

46 A bottle holds 750 ml of squash. Poppy fills glasses that each hold 250 ml.

How many glasses can be filled?

Answer: ___

(1)

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47 A rectangle measures 13 mm by 8 mm. A smaller rectangle 5 mm by 5 mm is cut out of one corner.

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

Answer: ___

(3)

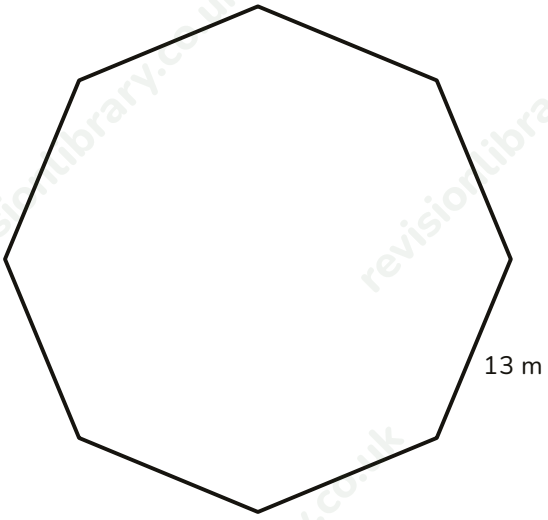
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48 A regular octagon has sides of length 13 m.

What is its perimeter?

Answer: ___ m

Diagram NOT accurately drawn



(2)

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49 A rectangle is 7 mm long and 17 mm wide.

What is its area in square millimetres?

Answer: ___

(1)

---

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

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

Answer: ___ litres

(2)

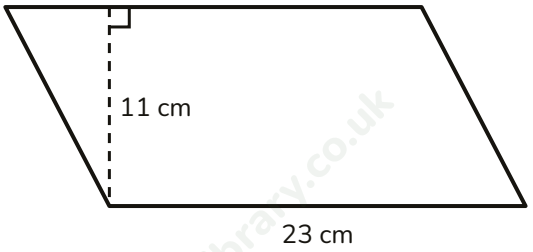
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51 A parallelogram has a base of 23 cm and a perpendicular height of 11 cm.

What is its area in square centimetres?

Answer: ___

Diagram NOT accurately drawn



(2)

---

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

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

Answer: ___ litres

(2)

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Mark scheme · 7.9 Perimeter, Area and Volume: 2-hour Pack

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

Question 1

12 x 13 seen	M1
78 square centimetres cao	A1

Answer: **78 square centimetres**

Question 2

10,000 cm cubed seen	M1
10 litres cao	A1

Answer: **10 litres**

Question 3

finds both areas	M1
31 square metres cao	A1

Answer: **31 square metres**

Question 4

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

Answer: **97 square metres**

Question 5

finds the area of each rectangle	M1
51 square metres cao	A1

Answer: **51 square metres**

Question 6

82 - 42 = 40 seen	M1
20 km cao	A1

Answer: **20 km**

Question 7

adds all six sides	M1
44 mm cao	A1

Answer: **44 mm**

Question 8

finds the area of each rectangle	M1
adds the two areas	M1
124 square centimetres cao	A1

Answer: **124 square centimetres**

Question 9

66 km cao	B1

Answer: **66 km**

Question 10

140 square millimetres cao	B1

Answer: **140 square millimetres**

Question 11

adds all four sides or doubles l + w	M1
116 m cao	A1

Answer: **116 m**

Question 12

152 m cao	B1

Answer: **152 m**

Question 13

746 g = 0.746 kg seen	M1
2.246 kg cao	A1

Answer: **2.246 kg**

Question 14

adds all six sides	M1
36 km cao	A1

Answer: **36 km**

Question 15

10,000 cm cubed seen	M1
10 litres cao	A1

Answer: **10 litres**

Question 16

49 square centimetres cao	B1

Answer: **49 square centimetres**

Question 17

Divide 48 by 6 or show correct method	M1
8 cm cao	B1

Answer: **8 cm**

Question 18

10 x 5 seen	M1
25 square millimetres cao	A1

Answer: **25 square millimetres**

Question 19

5 m cao	B1

Answer: **5 m**

Question 20

729 square centimetres cao	B1

Answer: **729 square centimetres**

Question 21

adds all six sides	M1
66 mm cao	A1

Answer: **66 mm**

Question 22

adds all four sides or doubles l + w	M1
100 m cao	A1

Answer: **100 m**

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Question 23

445 g = 0.445 kg seen — M1
3.545 kg cao — A1
Answer: **3.545 kg**

Question 24

adds all six sides — M1
60 cm cao — A1
Answer: **60 cm**

Question 25

adds all four sides or doubles l + w — M1
76 mm cao — A1
Answer: **76 mm**

Question 26

Subtract border twice from 8 to get inner side 6 (or show 8 - 1 - 1) — M1
36 m² cao — B1
Answer: **36 m²**

Question 27

538 g = 0.538 kg seen — M1
3.338 kg cao — A1
Answer: **3.338 kg**

Question 28

15 m cao — B1
Answer: **15 m**

Question 29

base x height — M1
168 square millimetres cao — A1
Answer: **168 square millimetres**

Question 30

4 cao — B1
Answer: **4**

Question 31

20,000 cm cubed seen — M1
20 litres cao — A1
Answer: **20 litres**

Question 32

589 g = 0.589 kg seen — M1
3.989 kg cao — A1
Answer: **3.989 kg**

Question 33

96 cao — B1
Answer: **96**

Question 34

multiplies two dimensions — M1
120 cm cubed cao — A1
Answer: **120 cm cubed**

Question 35

20,000 cm cubed seen — M1
20 litres cao — A1
Answer: **20 litres**

Question 36

volume formula seen — M1
168 cao — A1
Answer: **168**

Question 37

2 x 10 = 20 seen — M1
2 cm cao — A1
Answer: **2 cm**

Question 38

4 cao — B1
Answer: **4**

Question 39

11 x 8 = 88 seen — M1
8 cm cao — A1
Answer: **8 cm**

Question 40

25 square metres cao — B1
Answer: **25 square metres**

Question 41

base x height — M1
216 square centimetres cao — A1
Answer: **216 square centimetres**

Question 42

92 - 78 = 14 seen — M1
7 m cao — A1
Answer: **7 m**

Question 43

78 - 50 = 28 seen — M1
14 m cao — A1
Answer: **14 m**

Question 44

Divide each dimension by 10 to find how many cubes in each direction: 4, 3, 2 — M1
24 cao — B1
Answer: **24**

Question 45

divides area by length — M1
4 m cao — A1
Answer: **4 m**

Question 46

3 cao — B1
Answer: **3**

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Question 47

finds both areas	M1
subtracts	M1
79 square millimetres cao	A1

Answer: **79 square millimetres**

Question 48

8 x 13	M1
104 m cao	A1

Answer: **104 m**

Question 49

119 square millimetres cao	B1

Answer: **119 square millimetres**

Question 50

8,000 cm cubed seen	M1
8 litres cao	A1

Answer: **8 litres**

Question 51

base x height	M1
253 square centimetres cao	A1

Answer: **253 square centimetres**

Question 52

4,000 cm cubed seen	M1
4 litres cao	A1

Answer: **4 litres**

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