2.91 Perimeter and Area of Compound Shapes: Test Pack

Total Marks

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 40 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

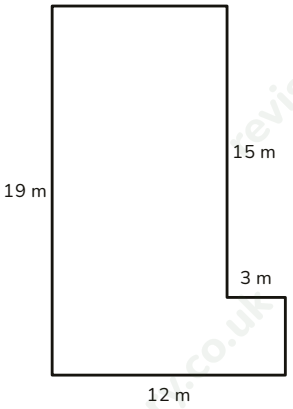
1 The outline of a rectilinear shape has sides, in order, 8 cm, 3 cm, 5 cm, 4 cm, 6 cm, 2 cm, 7 cm and 5 cm. Work out the perimeter of the shape.

- ☐ A) 32 cm
- ☐ B) 40 cm
- ☐ C) 44 cm
- ☐ D) 36 cm
- ☐ E) 48 cm

---

2 A classroom floor is made from a rectangle 12 m by 19 m with a rectangular corner 3 m by 15 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

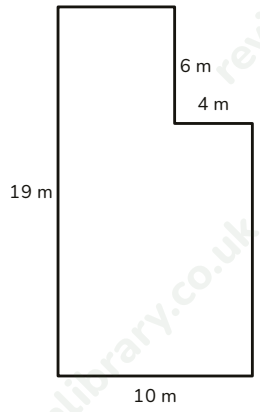


- ☐ A) 44 m
- ☐ B) 98 m
- ☐ C) 26 m
- ☐ D) 62 m
- ☐ E) 183 m

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3 A garden bed is made from a rectangle 10 m by 19 m with a rectangular corner 4 m by 6 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

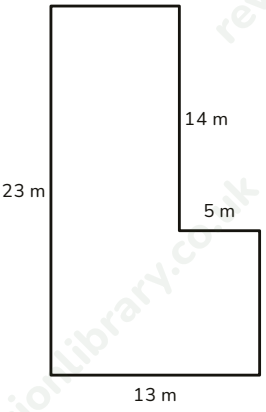


- ☐ A) 59 m
- ☐ B) 58 m
- ☐ C) 78 m
- ☐ D) 166 m
- ☐ E) 38 m

---

4 A stage is made from a rectangle 13 m by 23 m with a rectangular corner 5 m by 14 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

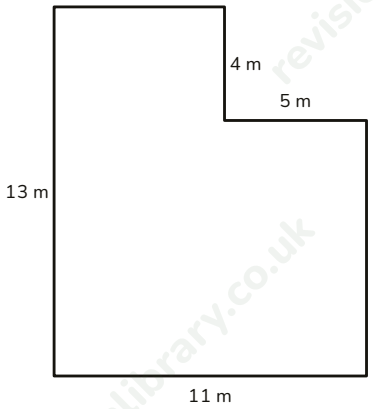


- ☐ A) 229 m
- ☐ B) 91 m
- ☐ C) 110 m
- ☐ D) 72 m
- ☐ E) 34 m

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5 A garden bed is made from a rectangle 11 m by 13 m with a rectangular corner 5 m by 4 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

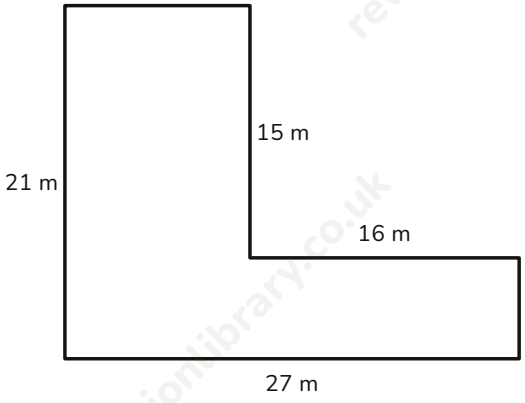


- ☐ A) 122 m²
- ☐ B) 123 m²
- ☐ C) 54 m²
- ☐ D) 143 m²
- ☐ E) 20 m²

---

6 A stage is made from a rectangle 27 m by 21 m with a rectangular corner 16 m by 15 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

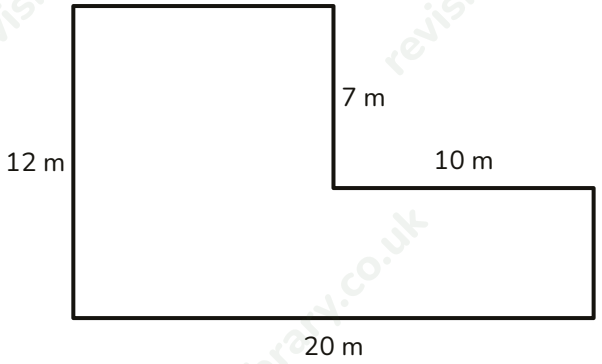


- ☐ A) 327 m²
- ☐ B) 567 m²
- ☐ C) 34 m²
- ☐ D) 66 m²
- ☐ E) 240 m²

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7 A stage is made from a rectangle 20 m by 12 m with a rectangular corner 10 m by 7 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

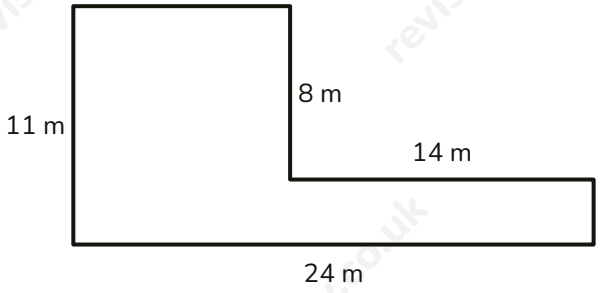


- ☐ A) 50 m²
- ☐ B) 70 m²
- ☐ C) 30 m²
- ☐ D) 240 m²
- ☐ E) 170 m²

---

8 A classroom floor is made from a rectangle 24 m by 11 m with a rectangular corner 14 m by 8 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

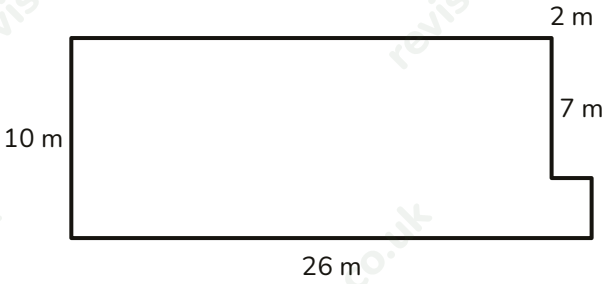


- ☐ A) 26 m
- ☐ B) 114 m
- ☐ C) 92 m
- ☐ D) 70 m
- ☐ E) 71 m

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9 A patio is made from a rectangle 26 m by 10 m with a rectangular corner 2 m by 7 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

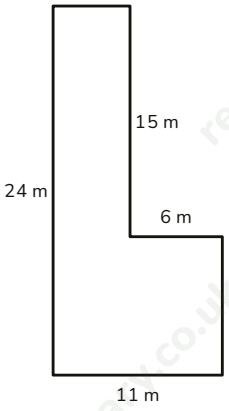


- ☐ A) 72 m²
- ☐ B) 54 m²
- ☐ C) 14 m²
- ☐ D) 246 m²
- ☐ E) 260 m²

---

10 A patio is made from a rectangle 11 m by 24 m with a rectangular corner 6 m by 15 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

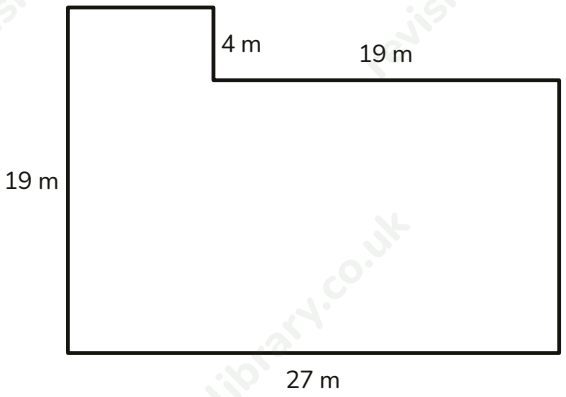


- ☐ A) 91 m
- ☐ B) 71 m
- ☐ C) 112 m
- ☐ D) 70 m
- ☐ E) 28 m

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11 A stage is made from a rectangle 27 m by 19 m with a rectangular corner 19 m by 4 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

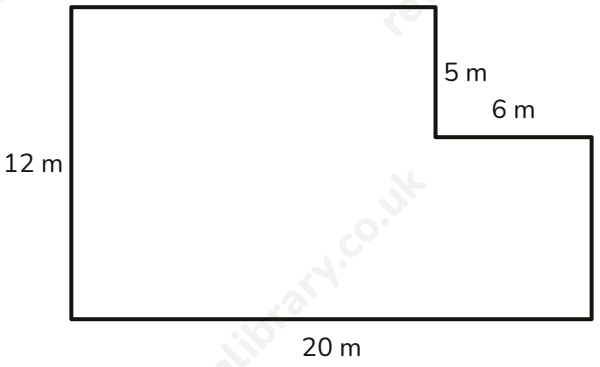


- ☐ A) 138 m
- ☐ B) 92 m
- ☐ C) 91 m
- ☐ D) 46 m
- ☐ E) 69 m

---

12 A patio is made from a rectangle 20 m by 12 m with a rectangular corner 6 m by 5 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

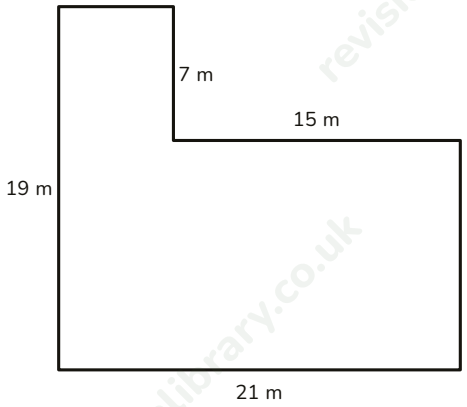


- ☐ A) 53 m
- ☐ B) 42 m
- ☐ C) 210 m
- ☐ D) 64 m
- ☐ E) 86 m

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13 A garden bed is made from a rectangle 21 m by 19 m with a rectangular corner 15 m by 7 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

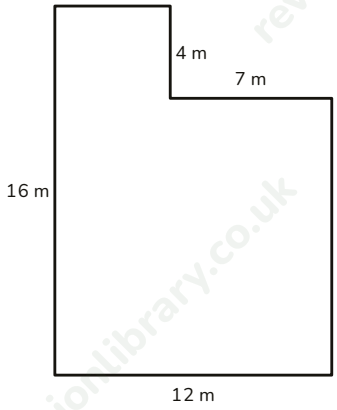


- ☐ A) 294 m²
- ☐ B) 399 m²
- ☐ C) 36 m²
- ☐ D) 293 m²
- ☐ E) 105 m²

---

14 A patio is made from a rectangle 12 m by 16 m with a rectangular corner 7 m by 4 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

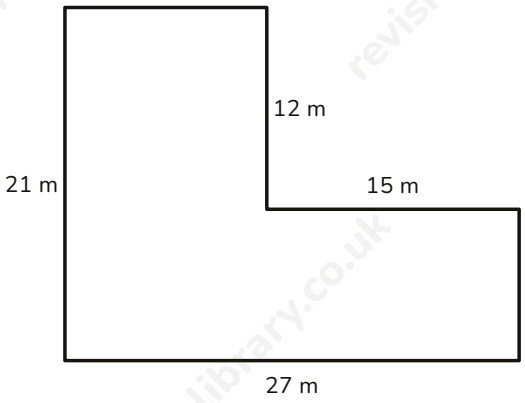


- ☐ A) 34 m
- ☐ B) 57 m
- ☐ C) 67 m
- ☐ D) 78 m
- ☐ E) 56 m

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15 A patio is made from a rectangle 27 m by 21 m with a rectangular corner 15 m by 12 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

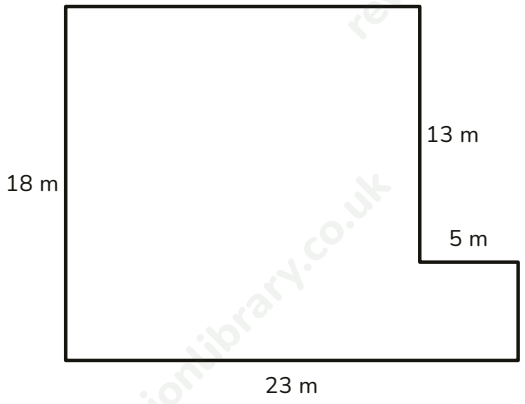


- ☐ A) 387 m²
- ☐ B) 180 m²
- ☐ C) 567 m²
- ☐ D) 388 m²
- ☐ E) 747 m²

---

16 A garden bed is made from a rectangle 23 m by 18 m with a rectangular corner 5 m by 13 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

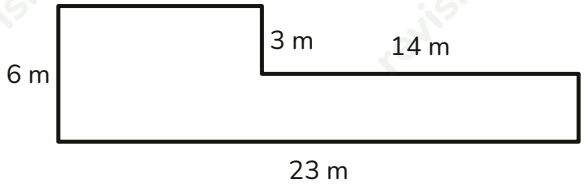


- ☐ A) 81 m
- ☐ B) 82 m
- ☐ C) 46 m
- ☐ D) 118 m
- ☐ E) 64 m

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17 A stage is made from a rectangle 23 m by 6 m with a rectangular corner 14 m by 3 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

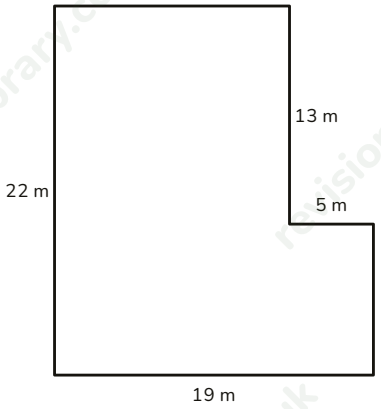


- [ ] A) 24 m
- [ ] B) 75 m
- [ ] C) 58 m
- [ ] D) 92 m
- [ ] E) 57 m

---

18 A patio is made from a rectangle 19 m by 22 m with a rectangular corner 5 m by 13 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

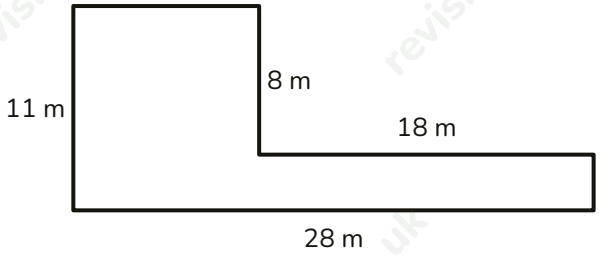


- [ ] A) 118 m
- [ ] B) 81 m
- [ ] C) 46 m
- [ ] D) 82 m
- [ ] E) 64 m

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19 A classroom floor is made from a rectangle 28 m by 11 m with a rectangular corner 18 m by 8 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

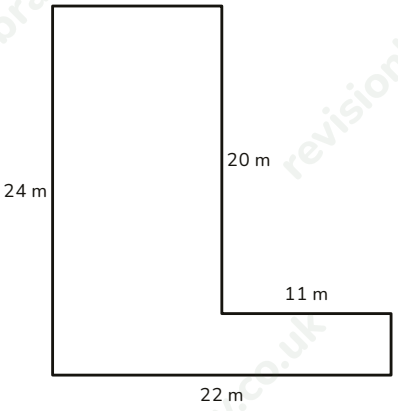


- ☐ A) 165 m²
- ☐ B) 308 m²
- ☐ C) 452 m²
- ☐ D) 144 m²
- ☐ E) 164 m²

---

20 A patio is made from a rectangle 22 m by 24 m with a rectangular corner 11 m by 20 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

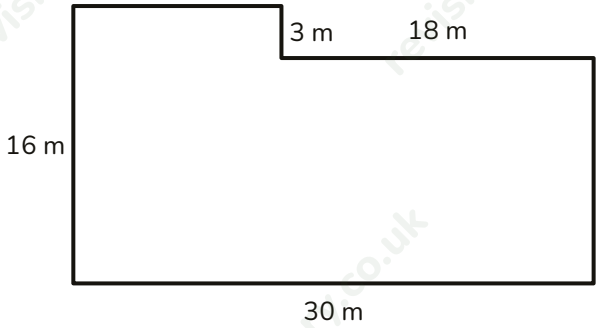


- ☐ A) 123 m
- ☐ B) 92 m
- ☐ C) 30 m
- ☐ D) 91 m
- ☐ E) 154 m

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21 A garden bed is made from a rectangle 30 m by 16 m with a rectangular corner 18 m by 3 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

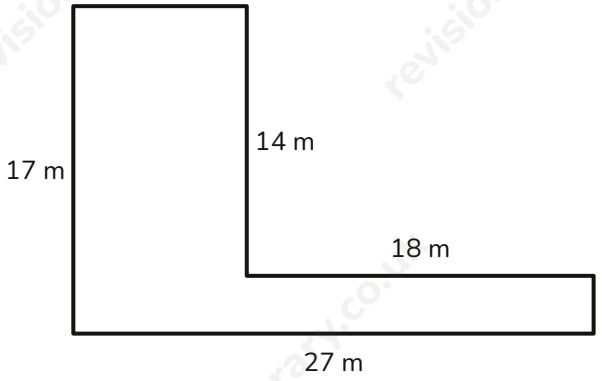


- ☐ A) 480 m²
- ☐ B) 534 m²
- ☐ C) 54 m²
- ☐ D) 425 m²
- ☐ E) 426 m²

---

22 A classroom floor is made from a rectangle 27 m by 17 m with a rectangular corner 18 m by 14 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

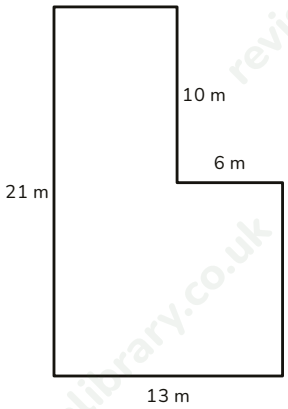


- ☐ A) 459 m²
- ☐ B) 24 m²
- ☐ C) 207 m²
- ☐ D) 252 m²
- ☐ E) 206 m²

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23 A patio is made from a rectangle 13 m by 21 m with a rectangular corner 6 m by 10 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn



- ☐ A) 68 m
- ☐ B) 36 m
- ☐ C) 84 m
- ☐ D) 52 m
- ☐ E) 100 m

---

24 A garden bed is made from a rectangle 24 m by 9 m with a rectangular corner 6 m by 3 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

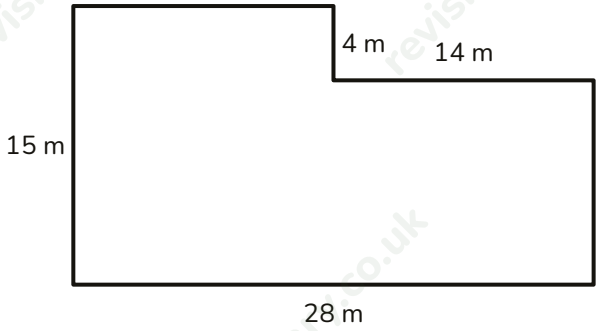


- ☐ A) 216 m²
- ☐ B) 198 m²
- ☐ C) 108 m²
- ☐ D) 48 m²
- ☐ E) 18 m²

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25 A garden bed is made from a rectangle 28 m by 15 m with a rectangular corner 14 m by 4 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

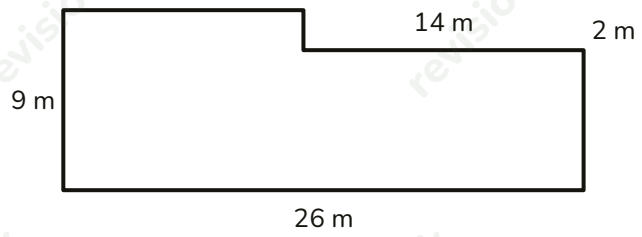


- ☐ A) 364 m²
- ☐ B) 420 m²
- ☐ C) 50 m²
- ☐ D) 363 m²
- ☐ E) 56 m²

---

26 A patio is made from a rectangle 26 m by 9 m with a rectangular corner 14 m by 2 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

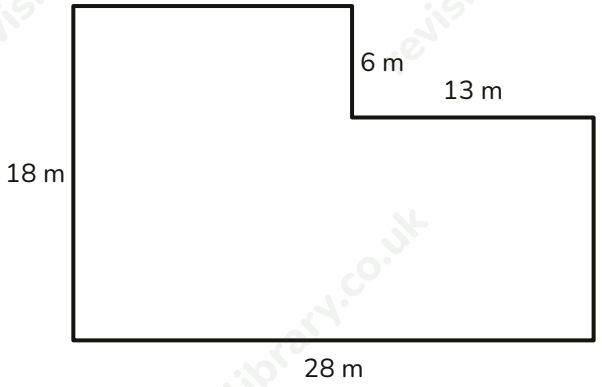


- ☐ A) 70 m
- ☐ B) 206 m
- ☐ C) 38 m
- ☐ D) 54 m
- ☐ E) 102 m

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27 A patio is made from a rectangle 28 m by 18 m with a rectangular corner 13 m by 6 m removed, leaving an L-shape. What is the area of the L-shape?

Diagram NOT accurately drawn

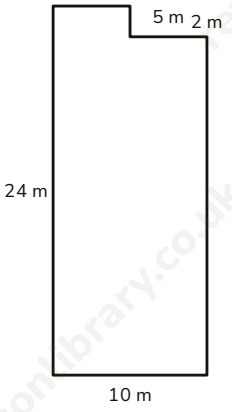


- [ ] A) 180 m²
- [ ] B) 426 m²
- [ ] C) 78 m²
- [ ] D) 54 m²
- [ ] E) 504 m²

---

28 A stage is made from a rectangle 10 m by 24 m with a rectangular corner 5 m by 2 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn



- [ ] A) 75 m
- [ ] B) 54 m
- [ ] C) 68 m
- [ ] D) 61 m
- [ ] E) 82 m

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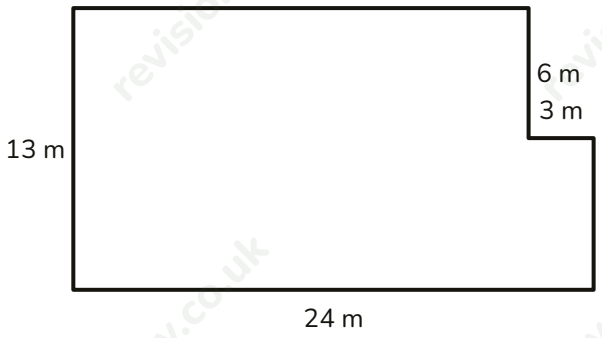
29 A rectilinear shape has side lengths around the perimeter: 9 cm, 4 cm, 4 cm, 3 cm, 5 cm and x cm. The total perimeter is 32 cm. What is x?

- ☐ A) 5 cm
- ☐ B) 8 cm
- ☐ C) 6 cm
- ☐ D) 7 cm
- ☐ E) 3 cm

---

30 A patio is made from a rectangle 24 m by 13 m with a rectangular corner 3 m by 6 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

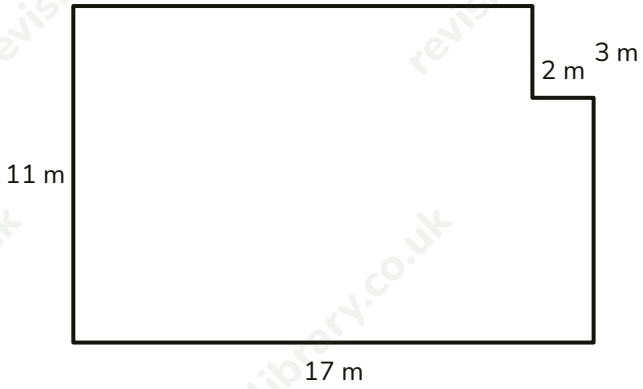


- ☐ A) 65 m
- ☐ B) 56 m
- ☐ C) 83 m
- ☐ D) 92 m
- ☐ E) 74 m

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31 A classroom floor is made from a rectangle 17 m by 11 m with a rectangular corner 2 m by 3 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn

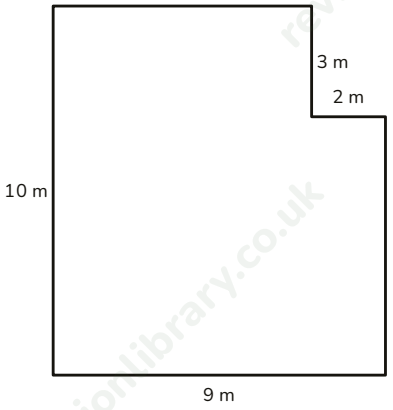


- [ ] A) 56 m
- [ ] B) 66 m
- [ ] C) 57 m
- [ ] D) 46 m
- [ ] E) 61 m

---

32 A garden bed is made from a rectangle 9 m by 10 m with a rectangular corner 2 m by 3 m removed, leaving an L-shape. What is the perimeter of the L-shape?

Diagram NOT accurately drawn



- [ ] A) 38 m
- [ ] B) 28 m
- [ ] C) 84 m
- [ ] D) 39 m
- [ ] E) 48 m

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33 Two rectangles, 7 cm by 3 cm and 7 cm by 4 cm, are placed so the 7 cm sides are aligned and the rectangles share that side (they are stacked). Find the perimeter of the combined shape.

(2)

---

34 A building plan shows an 8 m by 6 m rectangle. From one side a 2 m by 3 m rectangle is removed and on another side a 4 m by 2 m rectangle is attached (externally). Find the area of the final shape.

(3)

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35 The perimeter of a rectilinear shape is 52 cm. The side lengths in order are 14 cm, 6 cm, x cm, 6 cm, 6 cm and 12 cm.

(a) Find x. **(2)**

.....

(b) The same shape can be split into a rectangle 14 cm by 6 cm and a square 6 cm by 6 cm. Find the total area of the shape. **(2)**

.....

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Mark scheme · 2.91 Perimeter and Area of Compound Shapes: Test Pack

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

Question 1

correct option B (40 cm) cao **B1**

Answer: B) 40 cm (8+3+5+4+6+2+7+5 = 40 cm).

Question 2

correct option D (62 m) cao **B1**

Answer: D) 62 m

Question 3

correct option B (58 m) cao **B1**

Answer: B) 58 m

Question 4

correct option D (72 m) cao **B1**

Answer: D) 72 m

Question 5

correct option B (123 m²) cao **B1**

Answer: B) 123 m²

Question 6

correct option A (327 m²) cao **B1**

Answer: A) 327 m²

Question 7

correct option E (170 m²) cao **B1**

Answer: E) 170 m²

Question 8

correct option D (70 m) cao **B1**

Answer: D) 70 m

Question 9

correct option D (246 m²) cao **B1**

Answer: D) 246 m²

Question 10

correct option D (70 m) cao **B1**

Answer: D) 70 m

Question 11

correct option B (92 m) cao **B1**

Answer: B) 92 m

Question 12

correct option D (64 m) cao **B1**

Answer: D) 64 m

Question 13

correct option A (294 m²) cao **B1**

Answer: A) 294 m²

Question 14

correct option E (56 m) cao **B1**

Answer: E) 56 m

Question 15

correct option A (387 m²) cao **B1**

Answer: A) 387 m²

Question 16

correct option B (82 m) cao **B1**

Answer: B) 82 m

Question 17

correct option C (58 m) cao **B1**

Answer: C) 58 m

Question 18

correct option D (82 m) cao **B1**

Answer: D) 82 m

Question 19

correct option E (164 m²) cao **B1**

Answer: E) 164 m²

Question 20

correct option B (92 m) cao **B1**

Answer: B) 92 m

Question 21

correct option E (426 m²) cao **B1**

Answer: E) 426 m²

Question 22

correct option C (207 m²) cao **B1**

Answer: C) 207 m²

Question 23

correct option A (68 m) cao **B1**

Answer: A) 68 m

Question 24

correct option B (198 m²) cao **B1**

Answer: B) 198 m²

Question 25

correct option A (364 m²) cao **B1**

Answer: A) 364 m²

Question 26

correct option A (70 m) cao **B1**

Answer: A) 70 m

Question 27

correct option B (426 m²) cao **B1**

Answer: B) 426 m²

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Question 28

correct option C (68 m) cao **B1**

Answer: C) 68 m

Question 29

correct option D (7 cm) cao **B1**

Answer: D) 7 cm

Question 30

correct option E (74 m) cao **B1**

Answer: E) 74 m

Question 31

correct option A (56 m) cao **B1**

Answer: A) 56 m

Question 32

correct option A (38 m) cao **B1**

Answer: A) 38 m

Question 33

Recognise combined outside dimensions are 7 cm by (3+4)=7 cm **M1**

Perimeter = 2(7+7) = 28 cm cao **A1**

Answer: 28 cm.

Question 34

Area of original 8 x 6 = 48 seen **M1**

Subtract removed 2 x 3 = 6 and add attached 4 x 2 = 8 (or show 48 - 6 + 8) **M1**

Final area = 48 - 6 + 8 = 50 m² cao **A1**

Answer: 50 m^2.

Question 35

(a) Sum known sides 14+6+6+6+12 = 44 or equivalent seen **M1**

(a) x = 52 - 44 = 8 cm cao **A1**

(a) Answer: x = 8 cm

(b) Areas 14x6 = 84 and 6x6 = 36 seen **M1**

(b) Total area = 84 + 36 = 120 cm² cao **A1**

(b) Answer: 120 cm^2

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