2.11 Perimeter, Area, Surface Area and Volume: 1-hour Pack

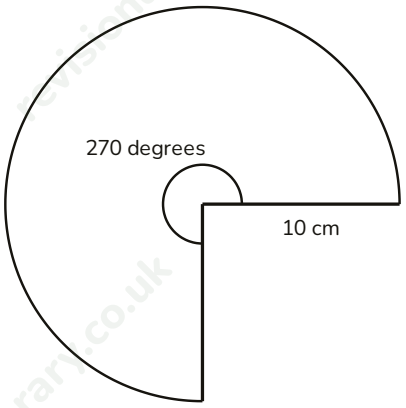
Total Marks

ISEB CE 13+ Mathematics · Calculator allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

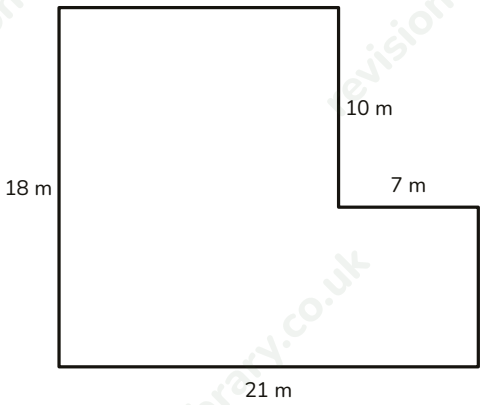
1 A sector of a circle has radius 10 cm and angle 270 degrees. Find the length of its arc. Give your answer in terms of π.



- ☐ A) 15 π cm
- ☐ B) 30 π cm
- ☐ C) 7.5 π cm
- ☐ D) 20 π cm
- ☐ E) 75 π cm

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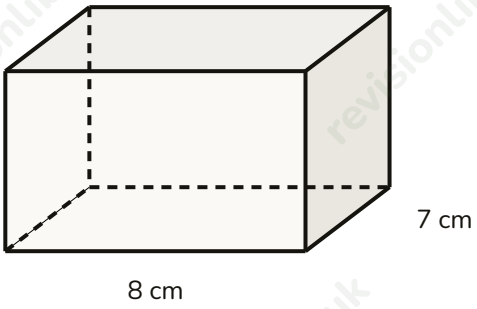
2 An L-shaped patio is made by removing a 7 m by 10 m rectangle from one corner of a 21 m by 18 m rectangle. Find its area.



- [ ] A) 378 m²
- [ ] B) 308 m²
- [ ] C) 361 m²
- [ ] D) 112 m²
- [ ] E) 78 m²

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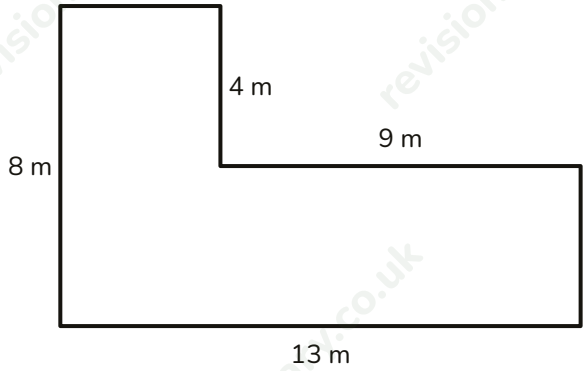
3 A cuboid has a volume of 392 cm³. Its base is 8 cm by 7 cm. Find the height of the cuboid.



- [ ] A) 26.1 cm
- [ ] B) 15 cm
- [ ] C) 7 cm
- [ ] D) 8 cm
- [ ] E) 14 cm

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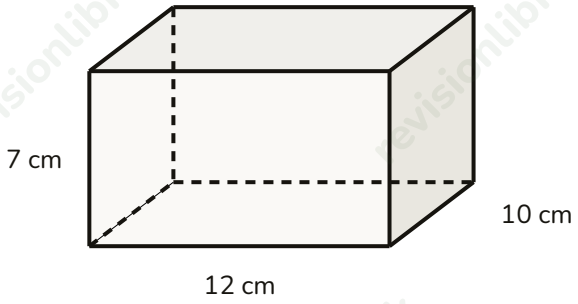
4 An L-shaped garden is made by removing a 9 m by 4 m rectangle from one corner of a 13 m by 8 m rectangle. Find its area.



- [ ] A) 42 m²
- [ ] B) 91 m²
- [ ] C) 68 m²
- [ ] D) 140 m²
- [ ] E) 36 m²

---

5 A cuboid measures 12 cm by 10 cm by 7 cm. Find its volume.



- [ ] A) 840 cm²
- [ ] B) 840 cm³
- [ ] C) 2520 cm³
- [ ] D) 1680 cm³
- [ ] E) 29 cm³

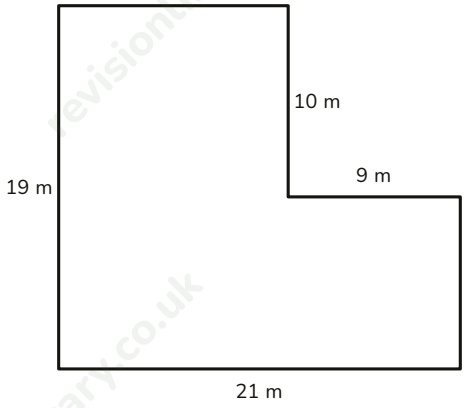
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6 A round table is a circle of diameter 24 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 96 π cm
- [ ] B) 576 π cm
- [ ] C) 48 π cm
- [ ] D) 12 π cm
- [ ] E) 24 π cm

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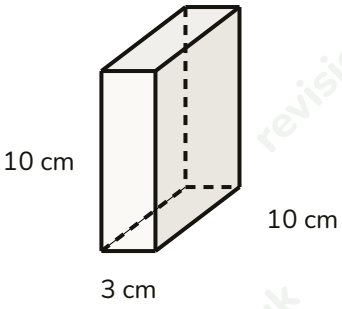
7 An L-shaped patio is made by removing a 9 m by 10 m rectangle from one corner of a 21 m by 19 m rectangle. Find its area.



- [ ] A) 309 m²
- [ ] B) 489 m²
- [ ] C) 380 m²
- [ ] D) 399 m²
- [ ] E) 108 m²

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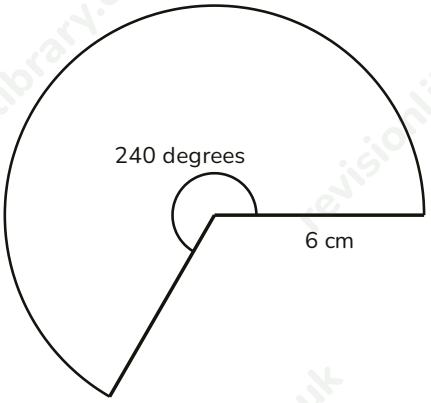
8 A cuboid measures 3 cm by 10 cm by 10 cm. Find its volume.



- [ ] A) 320 cm^3
- [ ] B) 300 cm^2
- [ ] C) 900 cm^3
- [ ] D) 23 cm^3
- [ ] E) 300 cm^3

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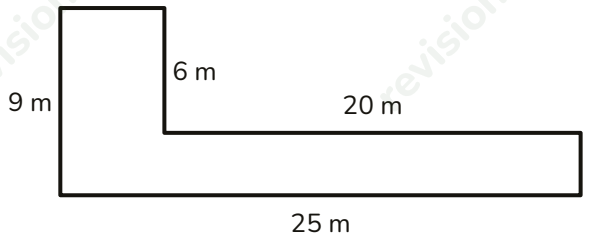
9 A sector of a circle has radius 6 cm and angle 240 degrees. Find its area. Give your answer in terms of π.



- [ ] A) 36 π cm^2
- [ ] B) 24 π cm^2
- [ ] C) 8 π cm^2
- [ ] D) 12 π cm^2
- [ ] E) 48 π cm^2

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10 An L-shaped car park is made by removing a 20 m by 6 m rectangle from one corner of a 25 m by 9 m rectangle. Find its perimeter.



- [ ] A) 42 m
- [ ] B) 105 m
- [ ] C) 94 m
- [ ] D) 68 m
- [ ] E) 16 m

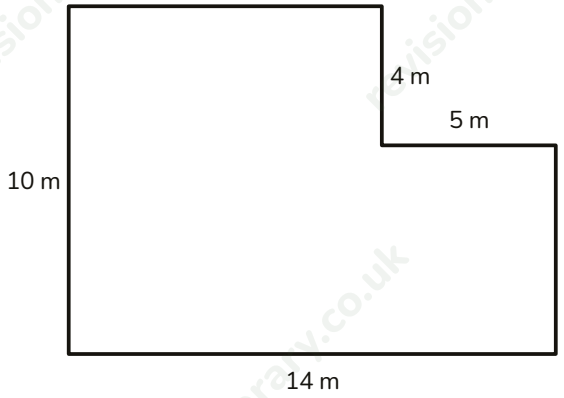
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11 A round table is a circle of diameter 22 cm. Find its area. Give your answer in terms of π.

- [ ] A) 121 π cm^2
- [ ] B) 11 π cm^2
- [ ] C) 484 π cm^2
- [ ] D) 22 π cm^2
- [ ] E) 44 π cm^2

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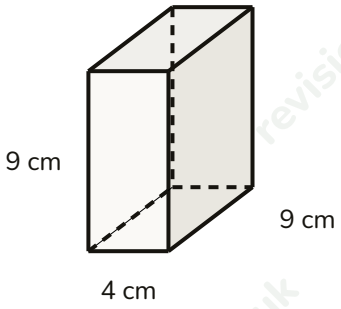
12 An L-shaped playground is made by removing a 5 m by 4 m rectangle from one corner of a 14 m by 10 m rectangle. Find its area.



- ☐ A) 48 m²
- ☐ B) 140 m²
- ☐ C) 120 m²
- ☐ D) 160 m²
- ☐ E) 20 m²

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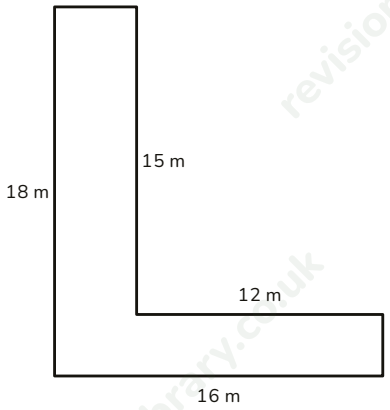
13 A cuboid measures 4 cm by 9 cm by 9 cm. Find its volume.



- ☐ A) 22 cm³
- ☐ B) 324 cm²
- ☐ C) 36 cm³
- ☐ D) 324 cm³
- ☐ E) 648 cm³

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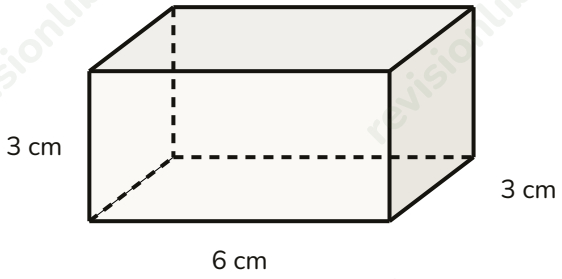
14 An L-shaped classroom floor is made by removing a 12 m by 15 m rectangle from one corner of a 16 m by 18 m rectangle. Find its perimeter.



- [ ] A) 122 m
- [ ] B) 14 m
- [ ] C) 95 m
- [ ] D) 41 m
- [ ] E) 68 m

---

15 A cuboid measures 6 cm by 3 cm by 3 cm. Find its volume.



- [ ] A) 54 cm^3
- [ ] B) 108 cm^3
- [ ] C) 12 cm^3
- [ ] D) 54 cm^2
- [ ] E) 18 cm^3

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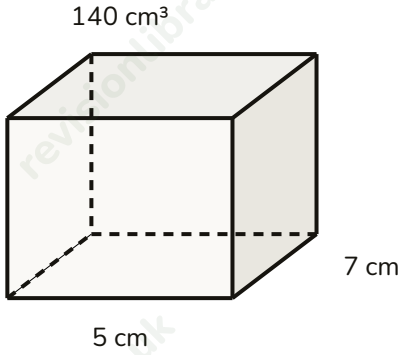
16 A pond is a circle of radius 11 cm. Find its area. Give your answer in terms of π.

- [ ] A) 242 π cm^2
- [ ] B) 484 π cm^2
- [ ] C) 121 π cm^2
- [ ] D) 11 π cm^2
- [ ] E) 22 π cm^2

---

17 A cuboid has a volume of 140 cm^3. Its base is 5 cm by 7 cm. Find the height of the cuboid.

Diagram NOT accurately drawn



- [ ] A) 28.0 cm
- [ ] B) 4 cm
- [ ] C) 20.0 cm
- [ ] D) 2 cm
- [ ] E) 12 cm

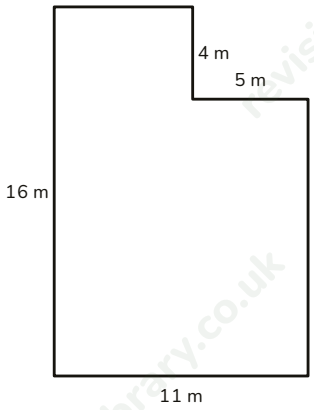
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18 A pond is a circle of diameter 10 cm. Find its area. Give your answer in terms of π.

- [ ] A) 5 π cm^2
- [ ] B) 10 π cm^2
- [ ] C) 25 π cm^2
- [ ] D) 100 π cm^2
- [ ] E) 20 π cm^2

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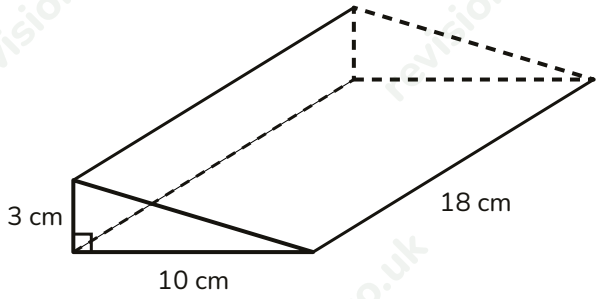
19 An L-shaped car park is made by removing a 5 m by 4 m rectangle from one corner of a 11 m by 16 m rectangle. Find its area.



- [ ] A) 176 m²
- [ ] B) 20 m²
- [ ] C) 156 m²
- [ ] D) 54 m²
- [ ] E) 167 m²

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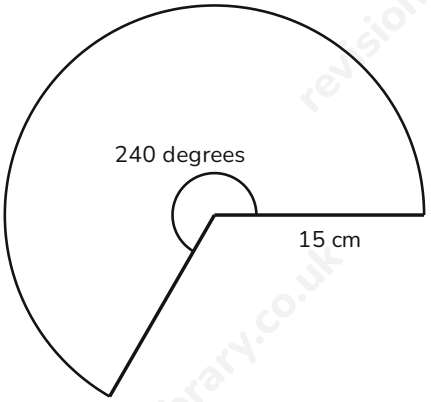
20 A prism has a right-angled triangle as its cross-section, with base 10 cm and height 3 cm. The prism is 18 cm long. Find its volume.



- [ ] A) 540 cm³
- [ ] B) 117 cm³
- [ ] C) 135 cm³
- [ ] D) 270 cm³
- [ ] E) 15 cm³

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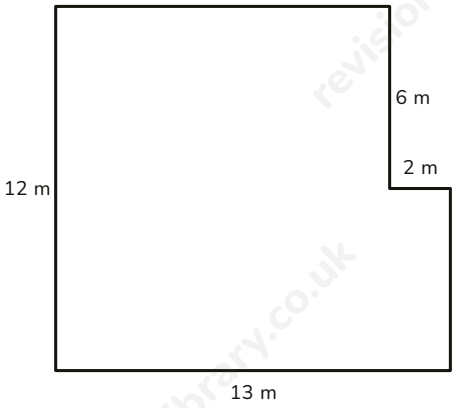
21 A sector of a circle has radius 15 cm and angle 240 degrees. Find the length of its arc. Give your answer in terms of π.



- ☐ A) 40 π cm
- ☐ B) 150 π cm
- ☐ C) 20 π cm
- ☐ D) 10 π cm
- ☐ E) 30 π cm

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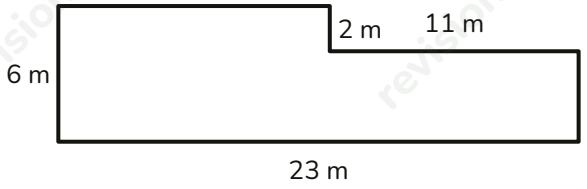
22 An L-shaped playground is made by removing a 2 m by 6 m rectangle from one corner of a 13 m by 12 m rectangle. Find its area.



- ☐ A) 144 m²
- ☐ B) 156 m²
- ☐ C) 148 m²
- ☐ D) 50 m²
- ☐ E) 168 m²

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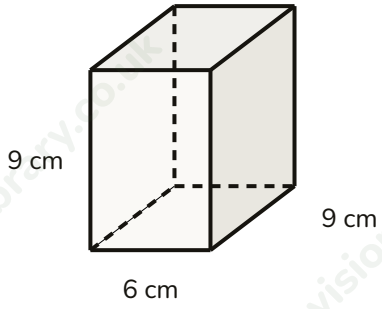
23 An L-shaped garden is made by removing a 11 m by 2 m rectangle from one corner of a 23 m by 6 m rectangle. Find its area.



- [ ] A) 48 m²
- [ ] B) 160 m²
- [ ] C) 116 m²
- [ ] D) 22 m²
- [ ] E) 138 m²

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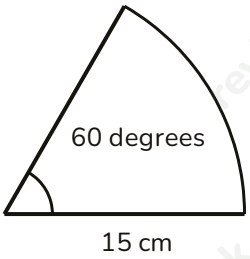
24 A cuboid measures 6 cm by 9 cm by 9 cm. Find its volume.



- [ ] A) 486 cm³
- [ ] B) 54 cm³
- [ ] C) 972 cm³
- [ ] D) 378 cm³
- [ ] E) 1458 cm³

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25 A sector of a circle has radius 15 cm and angle 60 degrees. Find its area. Give your answer in terms of π.

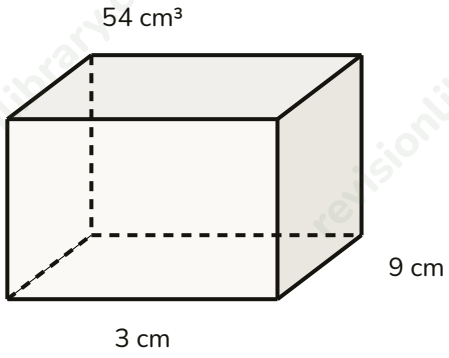


- ☐ A) 37.5 π cm^2
- ☐ B) 225 π cm^2
- ☐ C) 5 π cm^2
- ☐ D) 75 π cm^2
- ☐ E) 18.75 π cm^2

---

26 A cuboid has a volume of 54 cm^3. Its base is 3 cm by 9 cm. Find the height of the cuboid.

Diagram NOT accurately drawn



- ☐ A) 1 cm
- ☐ B) 18.0 cm
- ☐ C) 4.5 cm
- ☐ D) 6.0 cm
- ☐ E) 2 cm

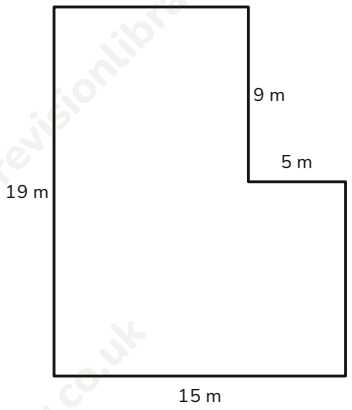
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27 A pond is a circle of diameter 20 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 20 π cm
- [ ] B) 80 π cm
- [ ] C) 10 π cm
- [ ] D) 400 π cm
- [ ] E) 40 π cm

---

28 An L-shaped classroom floor is made by removing a 5 m by 9 m rectangle from one corner of a 15 m by 19 m rectangle. Find its perimeter.



- [ ] A) 68 m
- [ ] B) 54 m
- [ ] C) 240 m
- [ ] D) 82 m
- [ ] E) 40 m

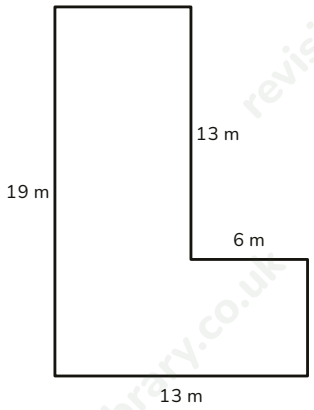
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29 A coin is a circle of radius 10 cm. Find its area. Give your answer in terms of π.

- [ ] A) 10 π cm^2
- [ ] B) 20 π cm^2
- [ ] C) 400 π cm^2
- [ ] D) 200 π cm^2
- [ ] E) 100 π cm^2

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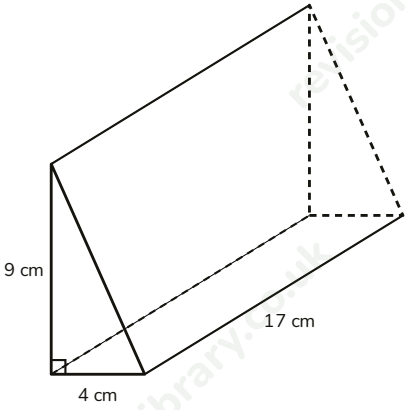
30 An L-shaped patio is made by removing a 6 m by 13 m rectangle from one corner of a 13 m by 19 m rectangle. Find its area.



- [ ] A) 247 m²
- [ ] B) 42 m²
- [ ] C) 169 m²
- [ ] D) 78 m²
- [ ] E) 325 m²

---

31 A prism has a right-angled triangle as its cross-section, with base 4 cm and height 9 cm. The prism is 17 cm long. Find its volume.



- [ ] A) 110.5 cm³
- [ ] B) 306 cm³
- [ ] C) 204 cm³
- [ ] D) 153 cm³
- [ ] E) 306 cm²

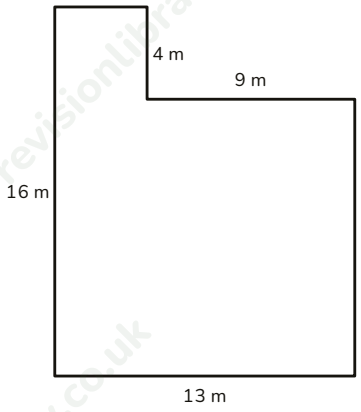
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32 A round table is a circle of radius 4 cm. Find its area. Give your answer in terms of π.

- ☐ A) $64\ \pi\ cm^2$
- ☐ B) $32\ \pi\ cm^2$
- ☐ C) $4\ \pi\ cm^2$
- ☐ D) $8\ \pi\ cm^2$
- ☐ E) $16\ \pi\ cm^2$

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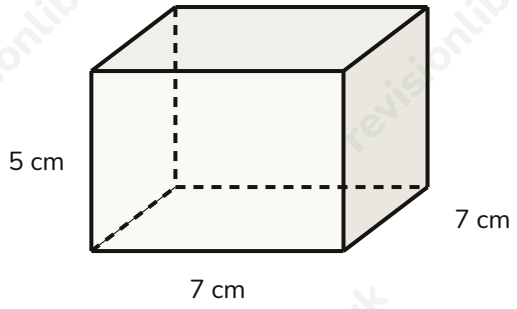
33 An L-shaped garden is made by removing a 9 m by 4 m rectangle from one corner of a 13 m by 16 m rectangle. Find its area.



- ☐ A) 36 m²
- ☐ B) 48 m²
- ☐ C) 244 m²
- ☐ D) 172 m²
- ☐ E) 208 m²

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34 A closed box is a cuboid measuring 7 cm by 7 cm by 5 cm. Find its total surface area.



- [ ] A) 168 cm²
- [ ] B) 238 cm²
- [ ] C) 245 cm²
- [ ] D) 76 cm²
- [ ] E) 336 cm²

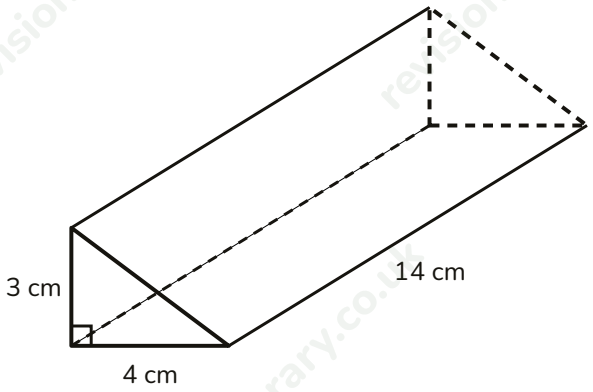
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35 A clock face is a circle of diameter 22 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 11 π cm
- [ ] B) 44 π cm
- [ ] C) 88 π cm
- [ ] D) 22 π cm
- [ ] E) 484 π cm

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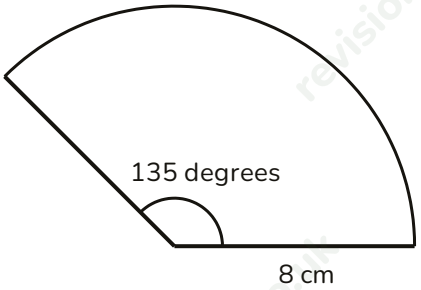
36 A prism has a right-angled triangle as its cross-section, with base 4 cm and height 3 cm. The prism is 14 cm long. Find its volume.



- ☐ A) 84 cm^2
- ☐ B) 56 cm^3
- ☐ C) 84 cm^3
- ☐ D) 49 cm^3
- ☐ E) 6 cm^3

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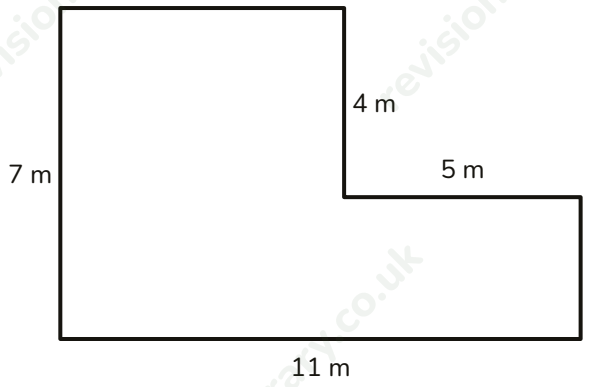
37 A sector of a circle has radius 8 cm and angle 135 degrees. Find the length of its arc. Give your answer in terms of π.



- ☐ A) 3 π cm
- ☐ B) 24 π cm
- ☐ C) 6 π cm
- ☐ D) 16 π cm
- ☐ E) 12 π cm

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38 An L-shaped classroom floor is made by removing a 5 m by 4 m rectangle from one corner of a 11 m by 7 m rectangle. Find its area.



- [ ] A) 57 m²
- [ ] B) 77 m²
- [ ] C) 18 m²
- [ ] D) 68 m²
- [ ] E) 97 m²

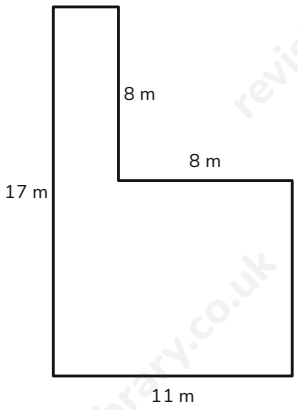
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39 A drum is a circle of diameter 16 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 16 π cm
- [ ] B) 256 π cm
- [ ] C) 32 π cm
- [ ] D) 64 π cm
- [ ] E) 8 π cm

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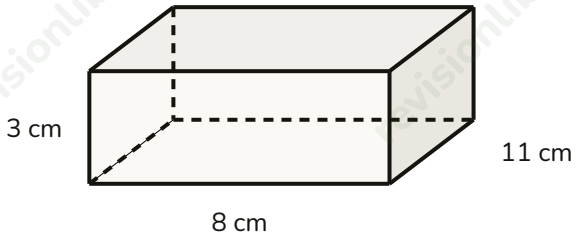
40 An L-shaped playground is made by removing a 8 m by 8 m rectangle from one corner of a 11 m by 17 m rectangle. Find its perimeter.



- [ ] A) 56 m
- [ ] B) 24 m
- [ ] C) 40 m
- [ ] D) 72 m
- [ ] E) 123 m

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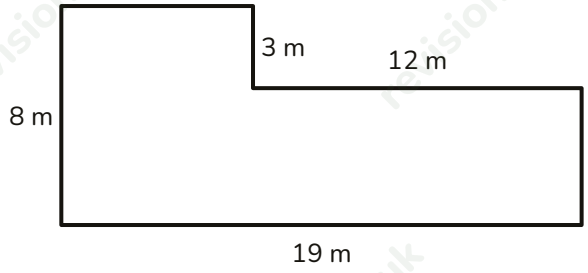
41 A cuboid measures 8 cm by 11 cm by 3 cm. Find its volume.



- [ ] A) 264 cm^2
- [ ] B) 264 cm^3
- [ ] C) 22 cm^3
- [ ] D) 290 cm^3
- [ ] E) 792 cm^3

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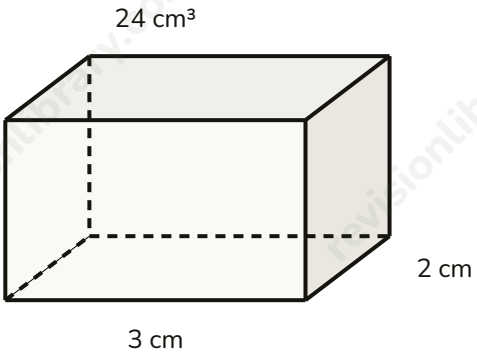
42 An L-shaped patio is made by removing a 12 m by 3 m rectangle from one corner of a 19 m by 8 m rectangle. Find its area.



- [ ] A) 36 m²
- [ ] B) 137 m²
- [ ] C) 116 m²
- [ ] D) 54 m²
- [ ] E) 152 m²

---

43 A cuboid has a volume of 24 cm³. Its base is 3 cm by 2 cm. Find the height of the cuboid.



- [ ] A) 4.8 cm
- [ ] B) 2 cm
- [ ] C) 8.0 cm
- [ ] D) 12.0 cm
- [ ] E) 4 cm

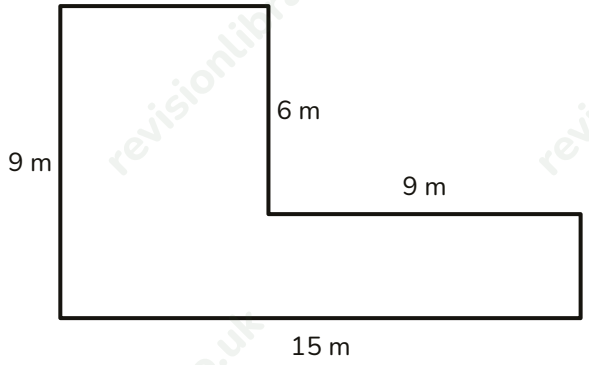
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44 A drum is a circle of radius 12 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 24 π cm
- [ ] B) 48 π cm
- [ ] C) 288 π cm
- [ ] D) 12 π cm
- [ ] E) 144 π cm

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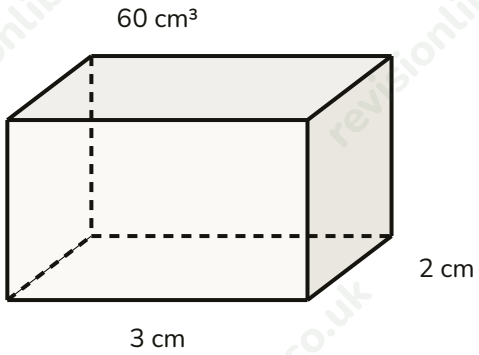
45 An L-shaped garden is made by removing a 9 m by 6 m rectangle from one corner of a 15 m by 9 m rectangle. Find its area.



- [ ] A) 135 m²
- [ ] B) 54 m²
- [ ] C) 189 m²
- [ ] D) 81 m²
- [ ] E) 120 m²

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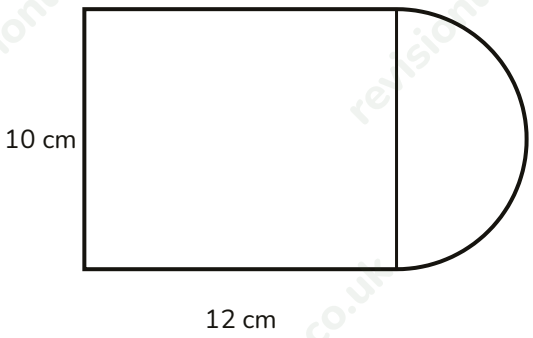
46 A cuboid has a volume of 60 cm³. Its base is 3 cm by 2 cm. Find the height of the cuboid.



- [ ] A) 12.0 cm
- [ ] B) 30.0 cm
- [ ] C) 20 cm
- [ ] D) 5 cm
- [ ] E) 10 cm

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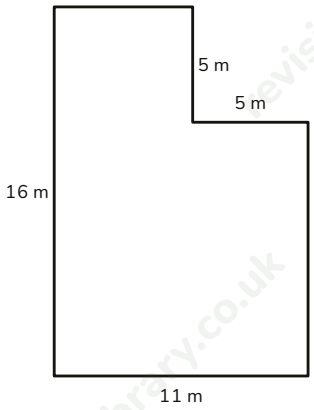
47 A shape is made from a rectangle 10 cm by 12 cm with a semicircle on one of the 10 cm sides, so that the diameter of the semicircle is 10 cm. Find the total area. Give your answer in the form $a + b\ \pi$.



- [ ] A) $120 + 50\ \pi\ \text{cm}^2$
- [ ] B) $240 + 12.5\ \pi\ \text{cm}^2$
- [ ] C) $120 + 12.5\ \pi\ \text{cm}^2$
- [ ] D) $120 + 25\ \pi\ \text{cm}^2$
- [ ] E) $120 + 5\ \pi\ \text{cm}^2$

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48 An L-shaped patio is made by removing a 5 m by 5 m rectangle from one corner of a 11 m by 16 m rectangle. Find its perimeter.



- [ ] A) 34 m
- [ ] B) 54 m
- [ ] C) 151 m
- [ ] D) 74 m
- [ ] E) 64 m

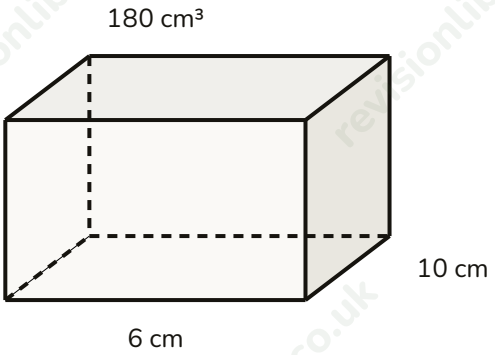
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49 A coin is a circle of radius 13 cm. Find its circumference. Give your answer in terms of π.

- [ ] A) 52 π cm
- [ ] B) 338 π cm
- [ ] C) 26 π cm
- [ ] D) 169 π cm
- [ ] E) 13 π cm

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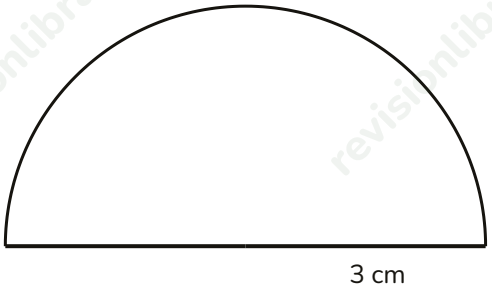
50 A cuboid has a volume of 180 cm³. Its base is 6 cm by 10 cm. Find the height of the cuboid.



- ☐ A) 6 cm
- ☐ B) 4 cm
- ☐ C) 3 cm
- ☐ D) 18.0 cm
- ☐ E) 11.3 cm

---

51 A semicircle has radius 3 cm. Find its perimeter, including the straight edge. Give your answer in the form a + b π.



- ☐ A) 6 + 6 π cm
- ☐ B) 6 + 3 π cm
- ☐ C) 3 + 6 π cm
- ☐ D) 3 + 3 π cm
- ☐ E) 6 π cm

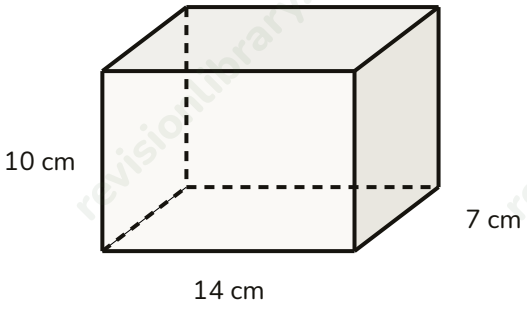
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52 A clock face is a circle of radius 8 cm. Find its area. Give your answer in terms of π.

- A) $64\ \pi\ cm^2$
- B) $128\ \pi\ cm^2$
- C) $16\ \pi\ cm^2$
- D) $8\ \pi\ cm^2$
- E) $256\ \pi\ cm^2$

---

53 A cuboid measures 14 cm by 7 cm by 10 cm. Find its volume.



- A) $2940\ cm^3$
- B) $980\ cm^2$
- C) $1960\ cm^3$
- D) $98\ cm^3$
- E) $980\ cm^3$

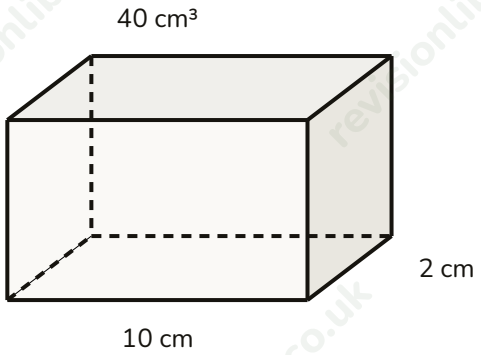
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54 A drum is a circle of radius 5 cm. Find its circumference. Give your answer in terms of π.

- A) $50\ \pi$ cm
- B) $20\ \pi$ cm
- C) $10\ \pi$ cm
- D) $5\ \pi$ cm
- E) $25\ \pi$ cm

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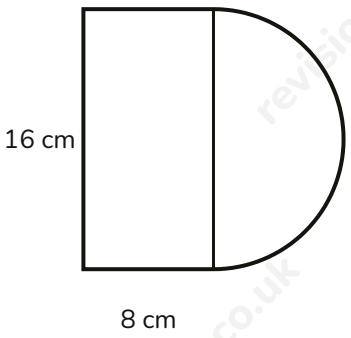
55 A cuboid has a volume of 40 cm³. Its base is 10 cm by 2 cm. Find the height of the cuboid.



- [ ] A) 1 cm
- [ ] B) 2 cm
- [ ] C) 3.3 cm
- [ ] D) 12 cm
- [ ] E) 4 cm

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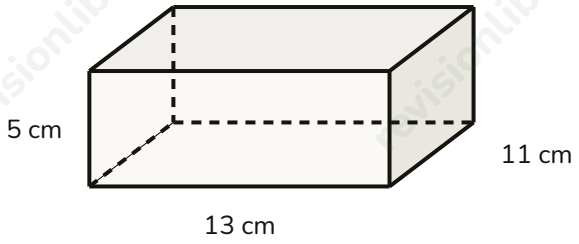
56 A shape is made from a rectangle 16 cm by 8 cm with a semicircle on one of the 16 cm sides, so that the diameter of the semicircle is 16 cm. Find the total area. Give your answer in the form $a + b\ \pi$.



- [ ] A) $128 + 32\ \pi\ \text{cm}^2$
- [ ] B) $128 + 64\ \pi\ \text{cm}^2$
- [ ] C) $256 + 32\ \pi\ \text{cm}^2$
- [ ] D) $128 + 8\ \pi\ \text{cm}^2$
- [ ] E) $128 + 128\ \pi\ \text{cm}^2$

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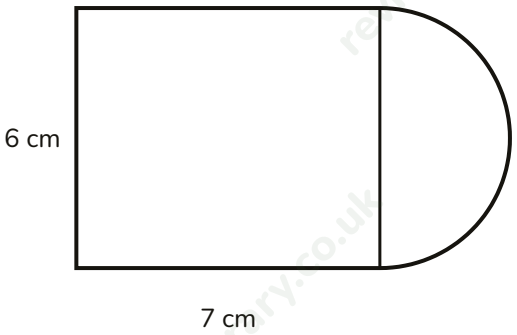
57 A cuboid measures 13 cm by 11 cm by 5 cm. Find its volume.



- ☐ A) 526 cm³
- ☐ B) 29 cm³
- ☐ C) 715 cm³
- ☐ D) 143 cm³
- ☐ E) 715 cm²

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58 A shape is made from a rectangle 6 cm by 7 cm with a semicircle on one of the 6 cm sides, so that the diameter of the semicircle is 6 cm. Find the total area. Give your answer in the form a + b π.



- ☐ A) $84 + 4.5\ \pi\ cm^2$
- ☐ B) $42 + 3\ \pi\ cm^2$
- ☐ C) $42 + 18\ \pi\ cm^2$
- ☐ D) $42 + 4.5\ \pi\ cm^2$
- ☐ E) $42 + 9\ \pi\ cm^2$

---

59 A cylindrical drum has a radius of 5 cm and a height of 12 cm.

(a) Calculate the volume of the drum, giving your answer to 3 significant figures. **(2)**

.....

(b) Calculate the total surface area of the drum, giving your answer to 3 significant figures. **(4)**

.....

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Mark scheme · 2.11 Perimeter, Area, Surface Area and Volume: 1-hour Pack

Question 1

A cao (15 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 15 π cm

Question 2

B cao (308 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: B) 308 m^2

Question 3

C cao (7 cm); use the correct formula and units **B1**

Answer: C) 7 cm

Question 4

C cao (68 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 68 m^2

Question 5

B cao (840 cm^3); use the correct formula and units **B1**

Answer: B) 840 cm^3

Question 6

E cao (24 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: E) 24 π cm

Question 7

A cao (309 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: A) 309 m^2

Question 8

E cao (300 cm^3); use the correct formula and units **B1**

Answer: E) 300 cm^3

Question 9

B cao (24 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: B) 24 π cm^2

Question 10

D cao (68 m); the notch does not change the perimeter of the bounding rectangle **B1**

Answer: D) 68 m

Question 11

A cao (121 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 121 π cm^2

Question 12

C cao (120 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 120 m^2

Question 13

D cao (324 cm^3); use the correct formula and units **B1**

Answer: D) 324 cm^3

Question 14

E cao (68 m); the notch does not change the perimeter of the bounding rectangle **B1**

Answer: E) 68 m

Question 15

A cao (54 cm^3); use the correct formula and units **B1**

Answer: A) 54 cm^3

Question 16

C cao (121 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 121 π cm^2

Question 17

B cao (4 cm); use the correct formula and units **B1**

Answer: B) 4 cm

Question 18

C cao (25 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 25 π cm^2

Question 19

C cao (156 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 156 m^2

Question 20

D cao (270 cm^3); use the correct formula and units **B1**

Answer: D) 270 cm^3

Question 21

C cao (20 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 20 π cm

Question 22

A cao (144 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: A) 144 m^2

Question 23

C cao (116 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 116 m^2

Question 24

A cao (486 cm^3); use the correct formula and units **B1**

Answer: A) 486 cm^3

Question 25

A cao (37.5 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 37.5 π cm^2

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Question 26

E cao (2 cm); use the correct formula and units **B1**

Answer: E) 2 cm

Question 27

A cao (20 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 20 π cm

Question 28

A cao (68 m); the notch does not change the perimeter of the bounding rectangle **B1**

Answer: A) 68 m

Question 29

E cao (100 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: E) 100 π cm^2

Question 30

C cao (169 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 169 m^2

Question 31

B cao (306 cm^3); use the correct formula and units **B1**

Answer: B) 306 cm^3

Question 32

E cao (16 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: E) 16 π cm^2

Question 33

D cao (172 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: D) 172 m^2

Question 34

B cao (238 cm^2); use the correct formula and units **B1**

Answer: B) 238 cm^2

Question 35

D cao (22 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: D) 22 π cm

Question 36

C cao (84 cm^3); use the correct formula and units **B1**

Answer: C) 84 cm^3

Question 37

C cao (6 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 6 π cm

Question 38

A cao (57 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: A) 57 m^2

Question 39

A cao (16 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 16 π cm

Question 40

A cao (56 m); the notch does not change the perimeter of the bounding rectangle **B1**

Answer: A) 56 m

Question 41

B cao (264 cm^3); use the correct formula and units **B1**

Answer: B) 264 cm^3

Question 42

C cao (116 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: C) 116 m^2

Question 43

E cao (4 cm); use the correct formula and units **B1**

Answer: E) 4 cm

Question 44

A cao (24 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 24 π cm

Question 45

D cao (81 m^2); area of large rectangle minus area of the corner removed **B1**

Answer: D) 81 m^2

Question 46

E cao (10 cm); use the correct formula and units **B1**

Answer: E) 10 cm

Question 47

C cao (120 + 12.5 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 120 + 12.5 π cm^2

Question 48

B cao (54 m); the notch does not change the perimeter of the bounding rectangle **B1**

Answer: B) 54 m

Question 49

C cao (26 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 26 π cm

Question 50

C cao (3 cm); use the correct formula and units **B1**

Answer: C) 3 cm

Question 51

B cao (6 + 3 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: B) 6 + 3 π cm

Question 52

A cao (64 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 64 π cm^2

Question 53

E cao (980 cm^3); use the correct formula and units **B1**

Answer: E) 980 cm^3

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Question 54

C cao (10 π cm); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: C) 10 π cm

Question 55

B cao (2 cm); use the correct formula and units **B1**

Answer: B) 2 cm

Question 56

A cao (128 + 32 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: A) 128 + 32 π cm^2

Question 57

C cao (715 cm^3); use the correct formula and units **B1**

Answer: C) 715 cm^3

Question 58

D cao (42 + 4.5 π cm^2); use C = 2 π r or A = π r^2 with the radius **B1**

Answer: D) 42 + 4.5 π cm^2

Question 59

(a) π x 5^2 x 12 oe **M1**

(a) 942 cm^3 (awrt 942) **A1**

(a) Answer: 942 cm^3

(b) curved surface area = 2 x π x 5 x 12 oe (=377) **M1**

(b) area of the two circular ends = 2 x π x 5^2 oe (=157) **M1**

(b) adds the curved surface area and the two ends **M1**

(b) 534 cm^2 (awrt 534) **A1**

(b) Answer: 534 cm^2

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