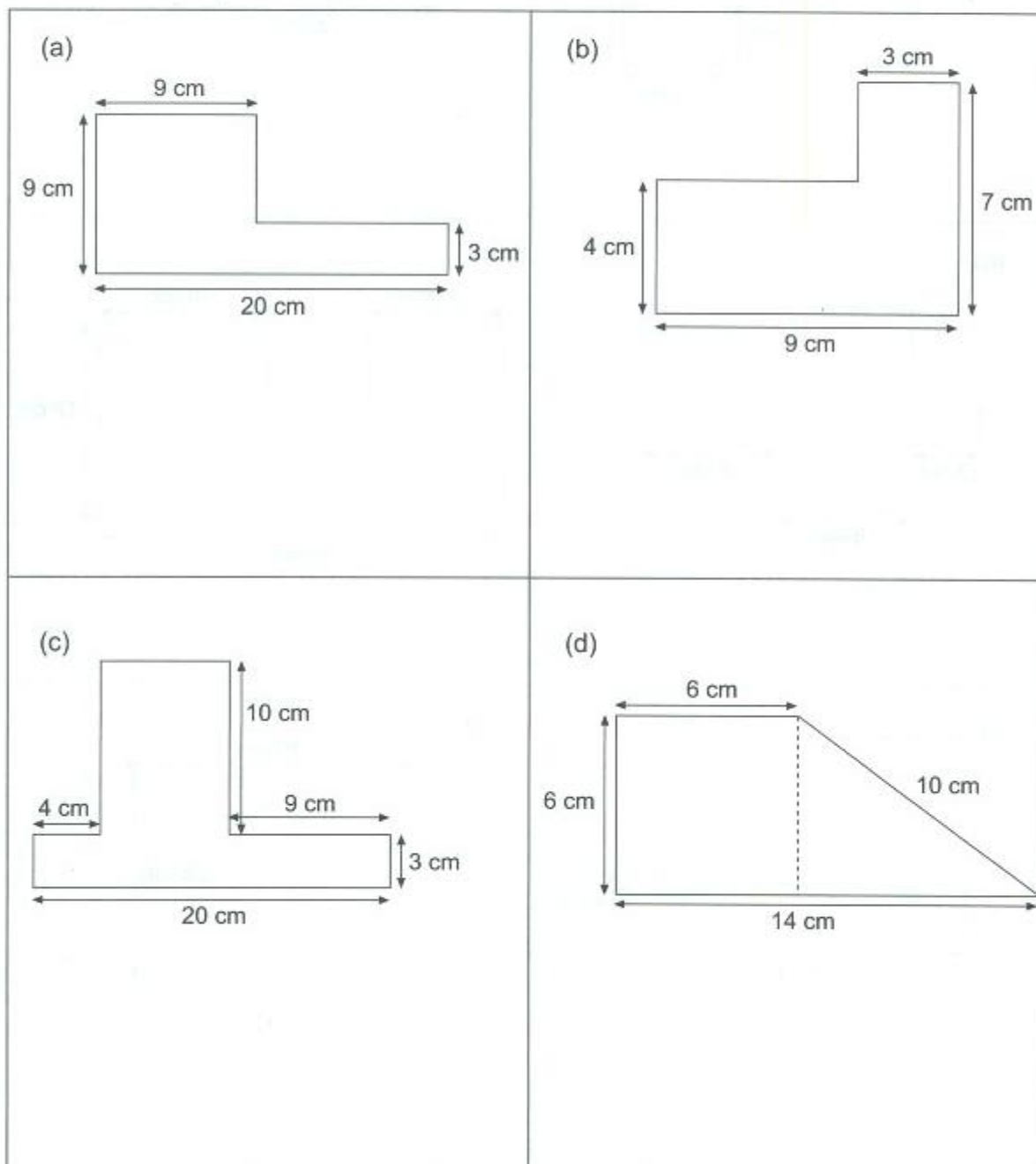


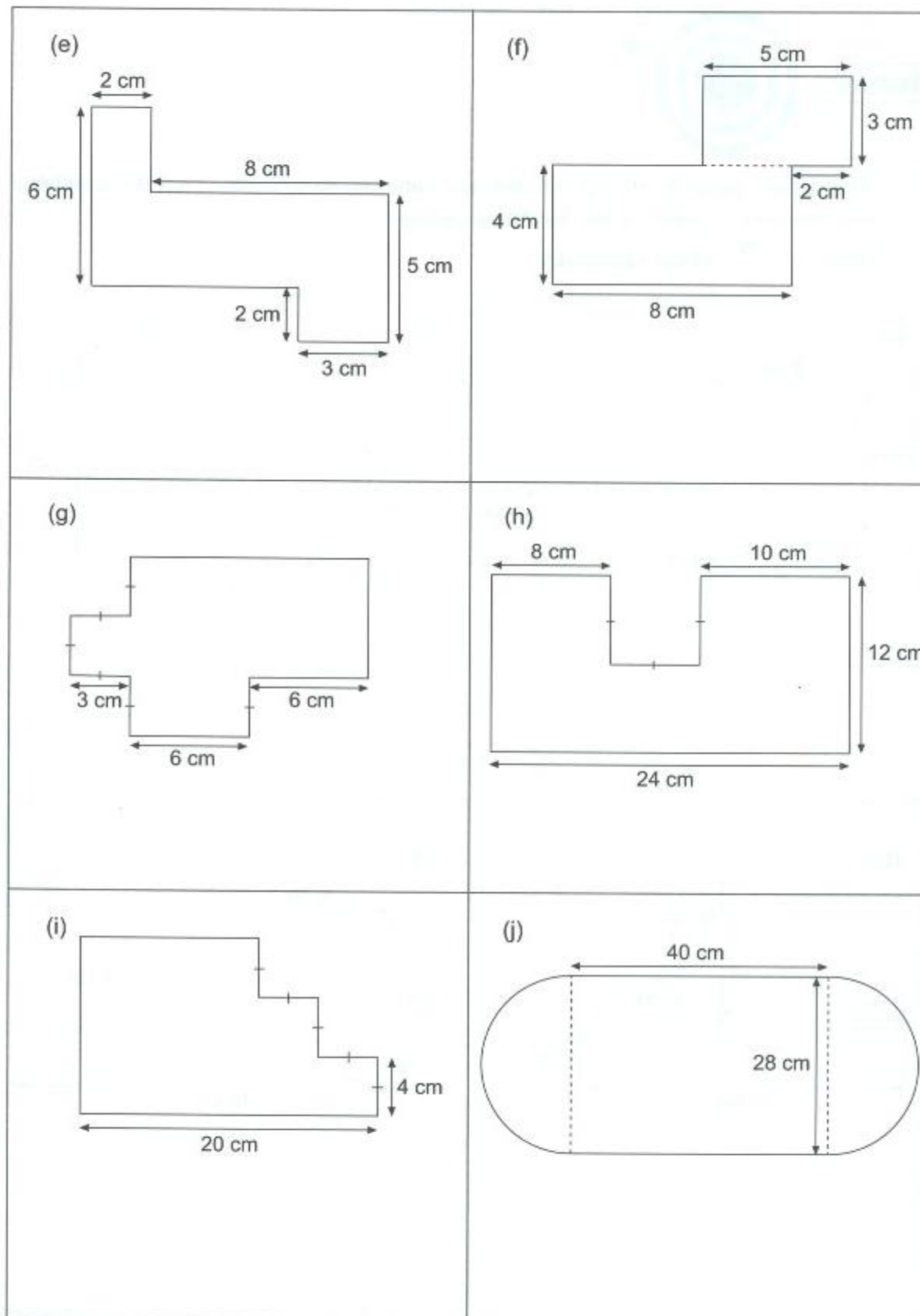


1. The curved parts of the figures are quadrants or semicircles. Find the perimeter and the area of each of the following figures.
(Take $\pi = \frac{22}{7}$ where necessary.)

**Answer**

Question 1

- a) Perimeter = 58 cm
Area = 114 cm²
- b) Perimeter = 32 cm
Area = 45 cm²
- c) Perimeter = 66 cm
Area = 130 cm²
- d) Perimeter = 36 cm
Area = 60 cm²



Answer

Question 1

e) Perimeter = 36 cm
Area = 42 cm²

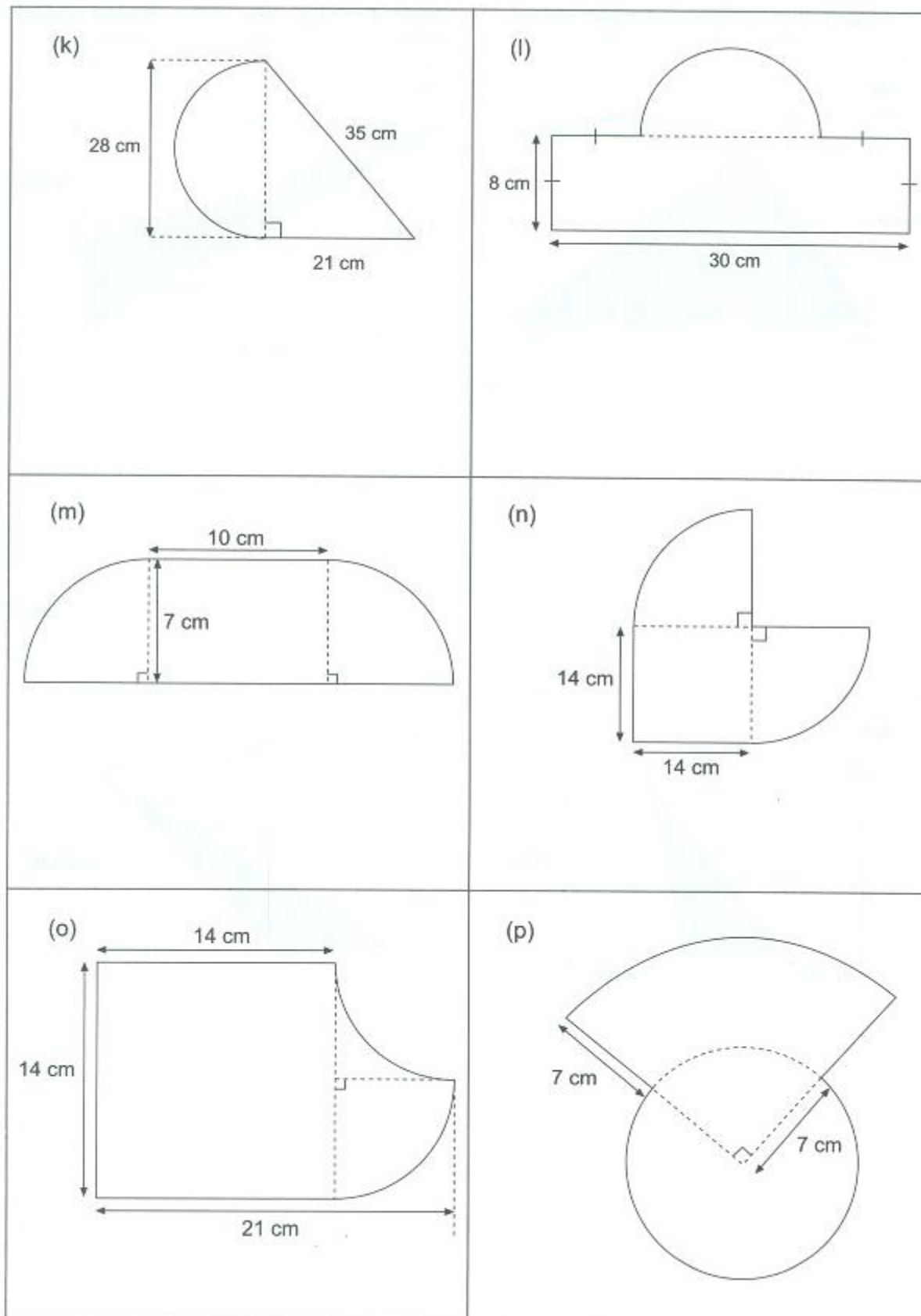
f) Perimeter = 34 cm
Area = 47 cm²

g) Perimeter = 48 cm
Area = 99 cm²

h) Perimeter = 84 cm
Area = 252 cm²

i) Perimeter = 64 cm
Area = 192 cm²

j) Perimeter = 168 cm
Area = 1736 cm²



Answer

Question 1

k) Perimeter = 100 cm
Area = 602 cm²

l) Perimeter = 84 cm
Area = 317 cm²

m) Perimeter = 56 cm
Area = 147 cm²

n) Perimeter = 100 cm
Area = 504 cm²

o) Perimeter = 64 cm
Area = 245 cm²

p) Perimeter = 69 cm
Area = 269.5 cm²

2. Each of the following figures shows a rectangle. Find the area of the shaded part(s).

Answer

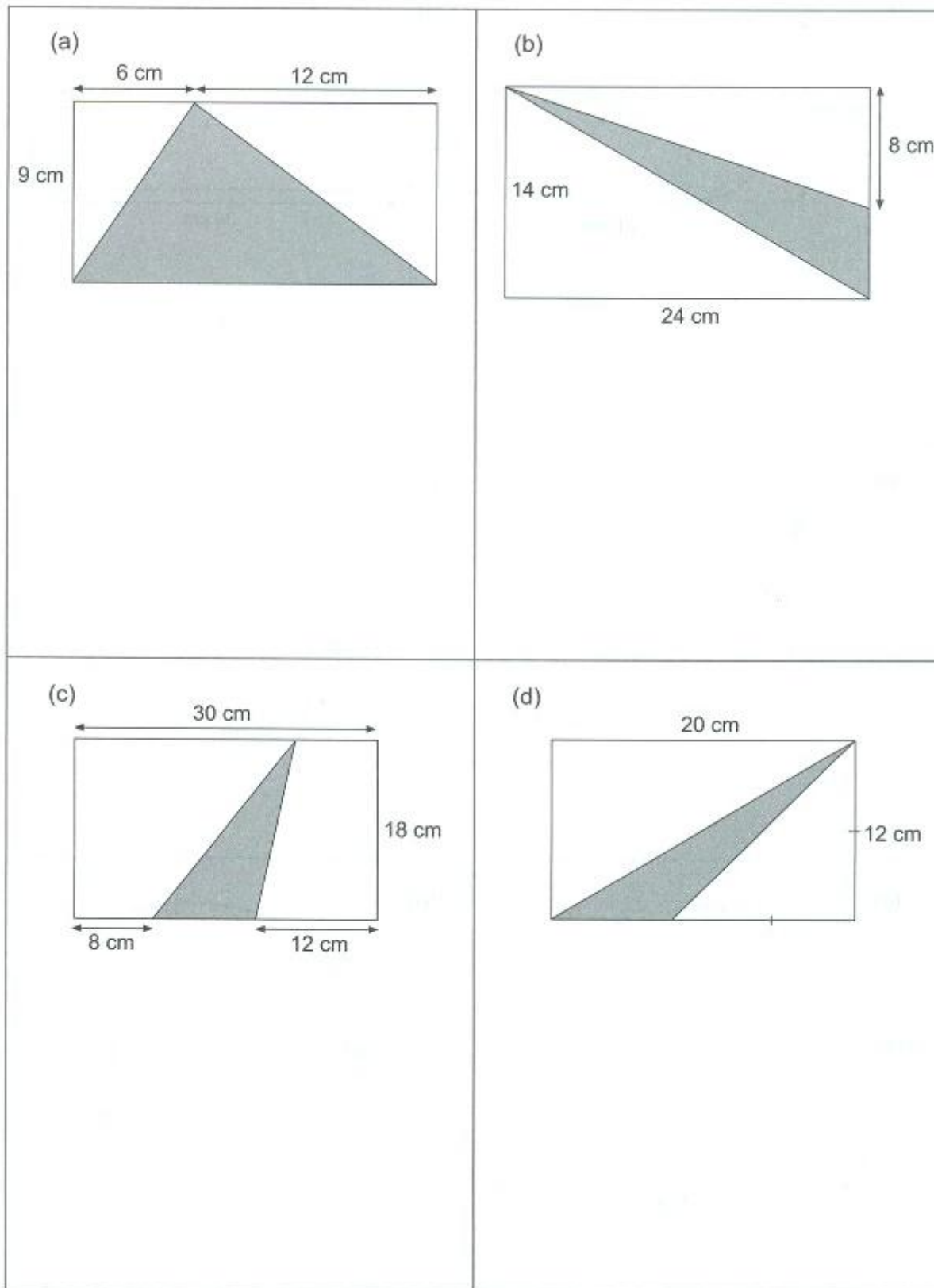
Question 2

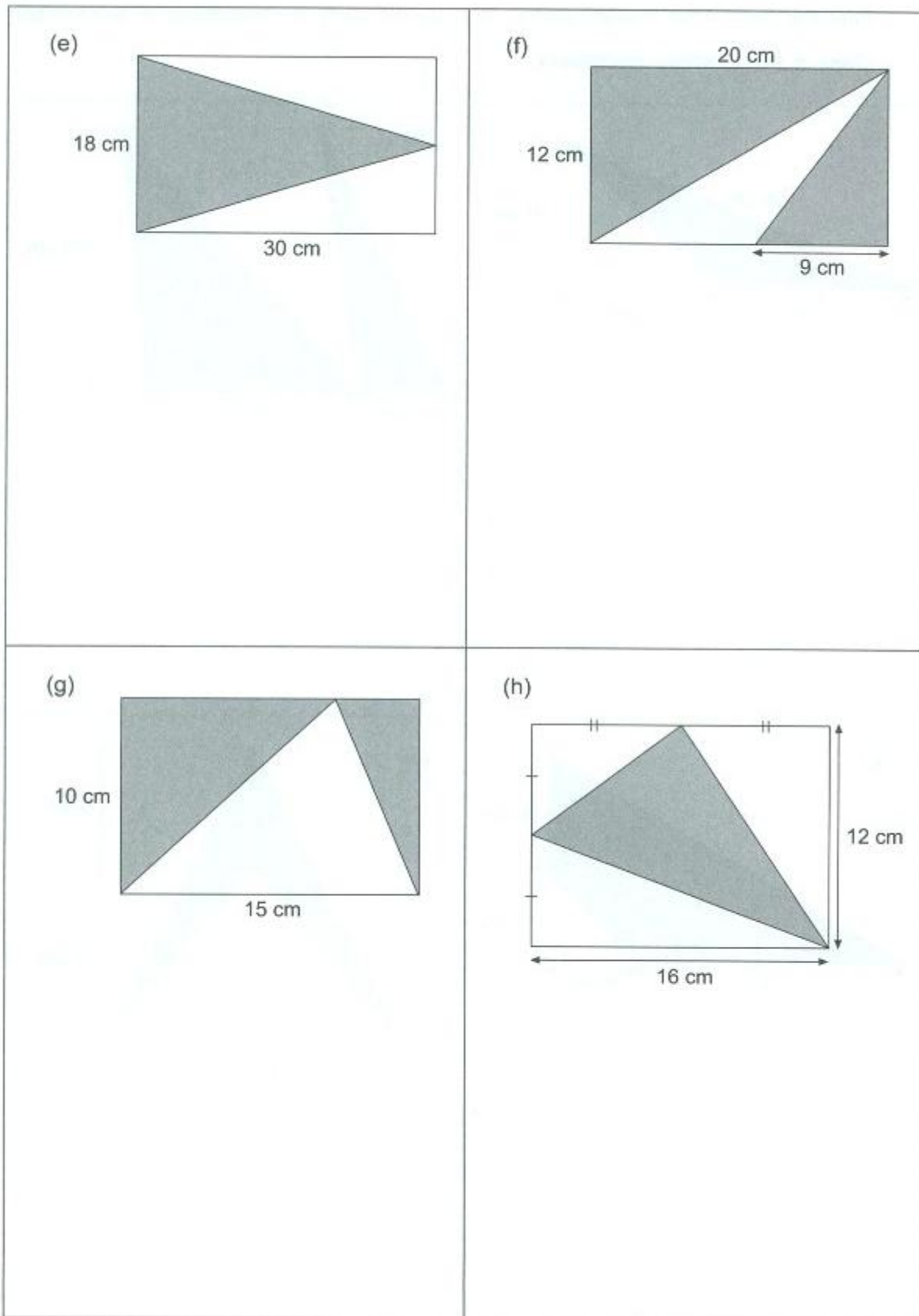
a) 81 cm^2

b) 72 cm^2

c) 90 cm^2

d) 48 cm^2





Answer

Question 2

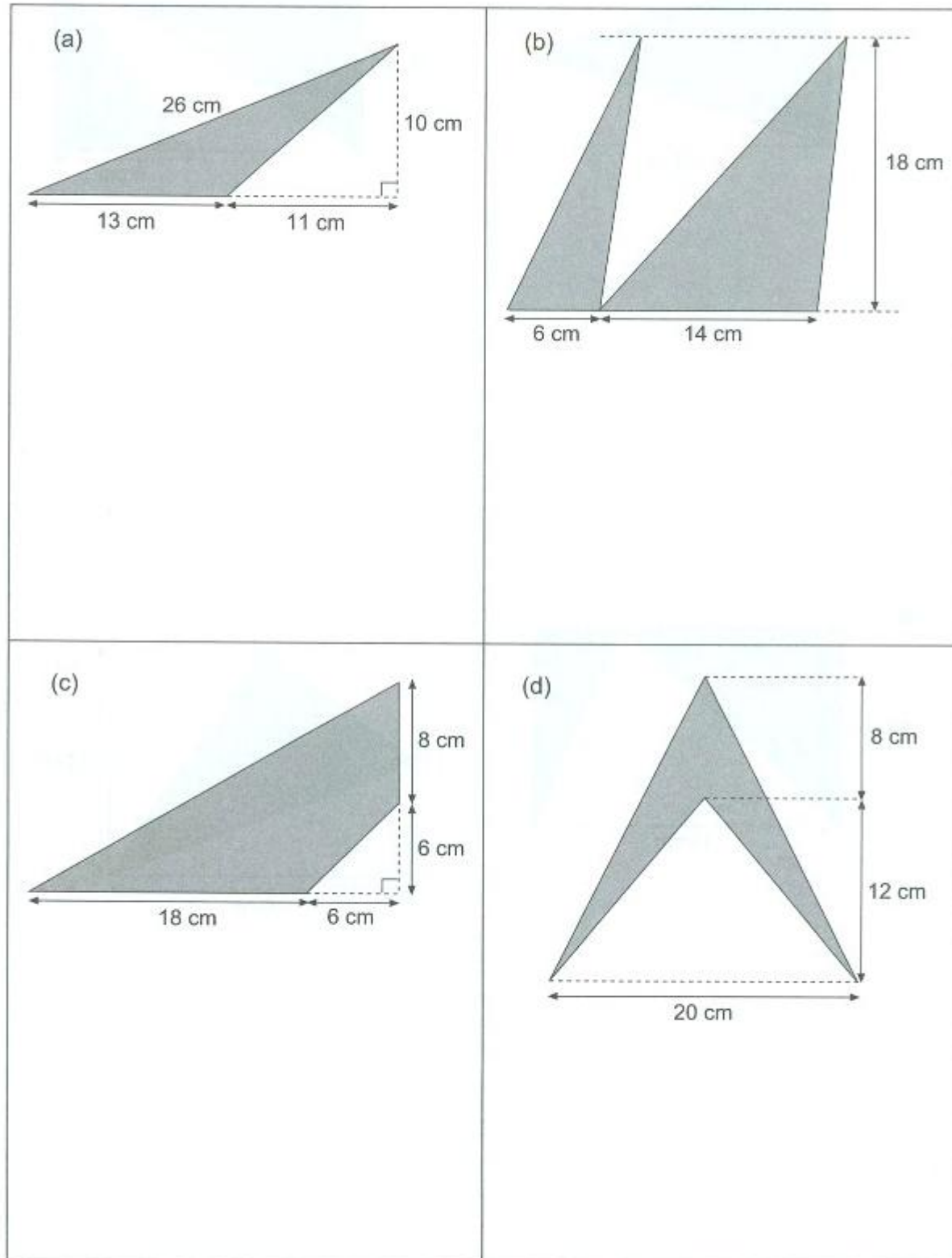
- e) 270 cm^2
- f) 174 cm^2
- g) 75 cm^2
- h) 72 cm^2

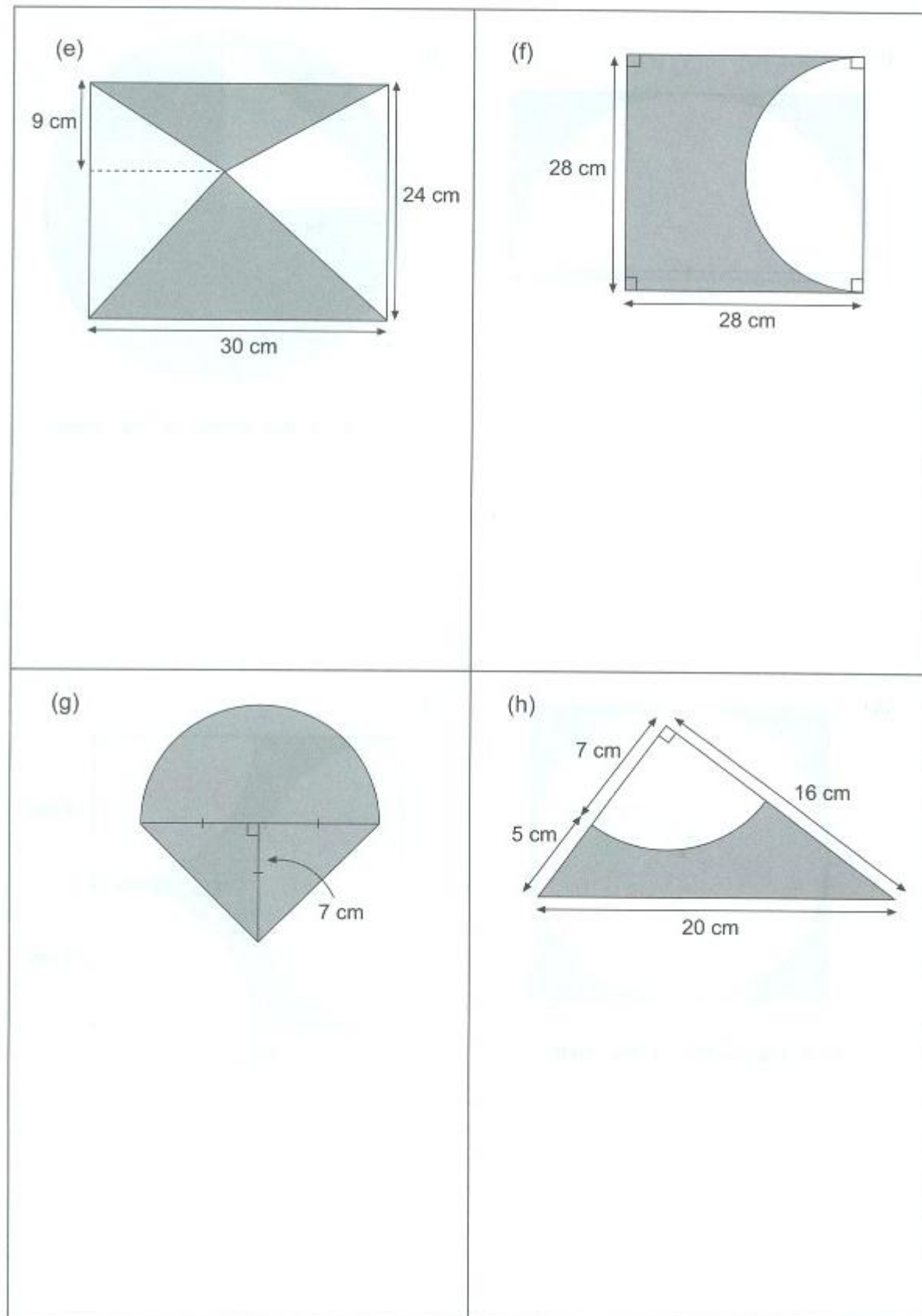
3. Find the area of the shaded part(s). The curved parts are quadrants or semicircles.
(Take $\pi = \frac{22}{7}$ where necessary.)

Answer

Question 3

- a) 65 cm^2
b) 180 cm^2
c) 150 cm^2
d) 80 cm^2



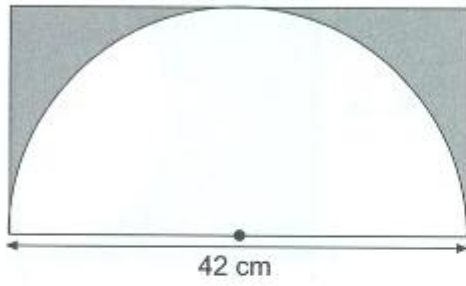


Answer

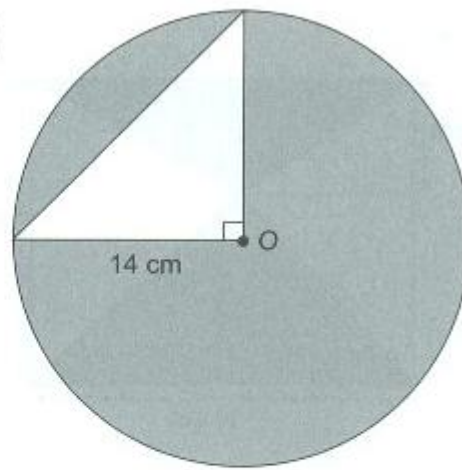
Question 3

- e) 360 cm^2
- f) 476 cm^2
- g) 126 cm^2
- h) 57.5 cm^2

(i)



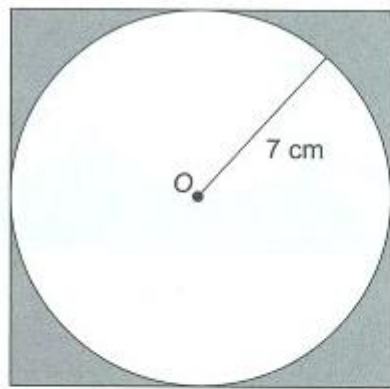
(j)



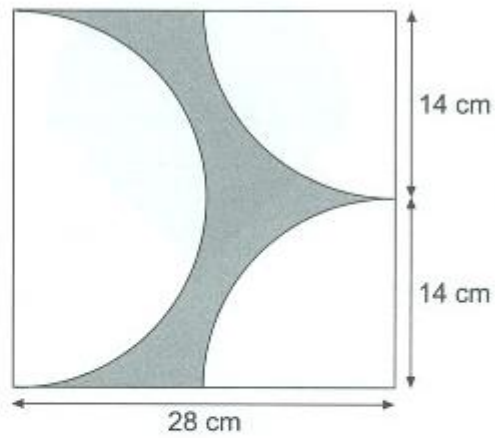
Answer
Question 3

- i) 189 cm^2
- j) 518 cm^2
- k) 42 cm^2
- l) 168 cm^2

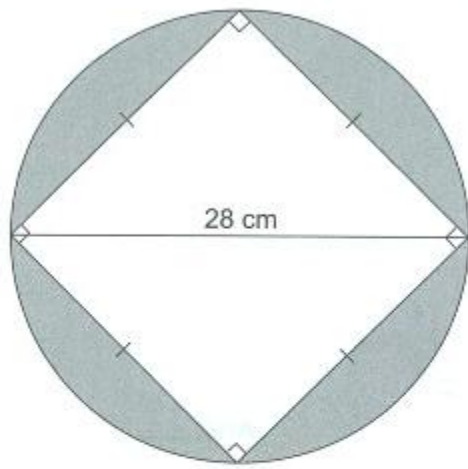
(k)



(l)



(m)

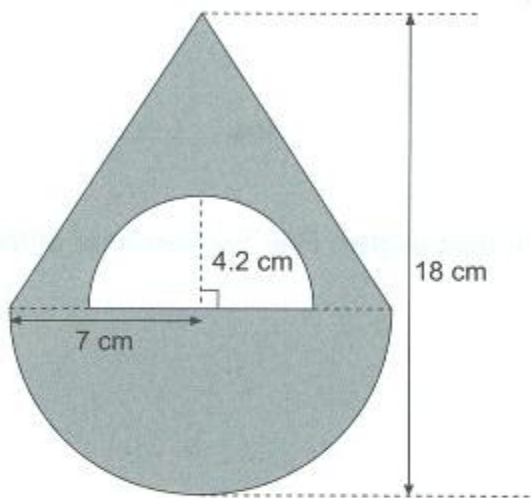

Answer

Question 3

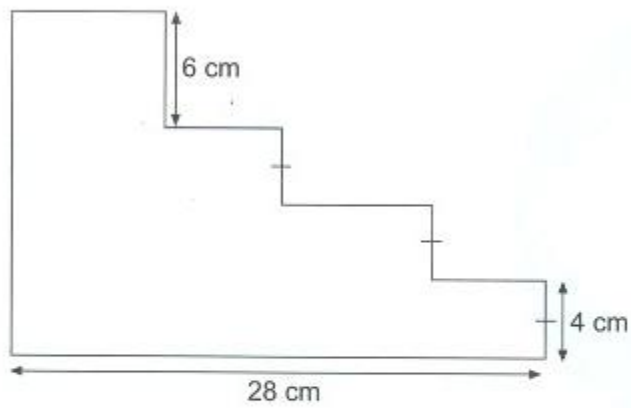
m) 224 cm^2

n) 126.28 cm^2

(n)



4. In the figure below, the lines meet at right angles. Find the perimeter of the figure.



Ans: _____ cm

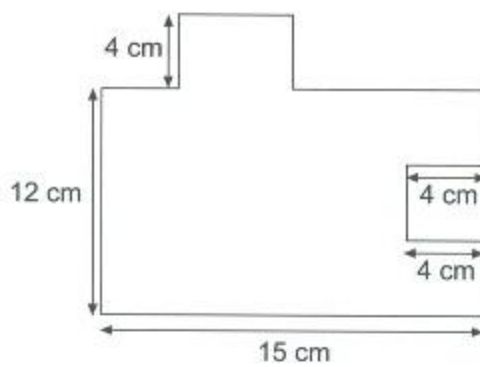
Answer

Q4) 92 cm

Q5) 70 cm

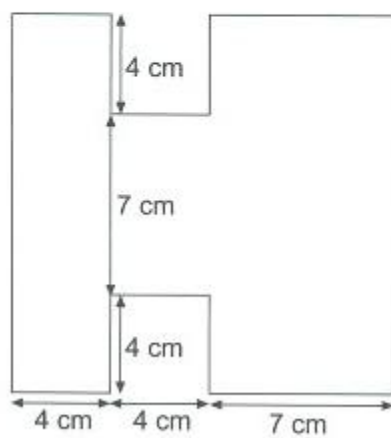
Q6) 76 cm

5. The lines in the figure below meet at right angles. Find the perimeter of the figure.



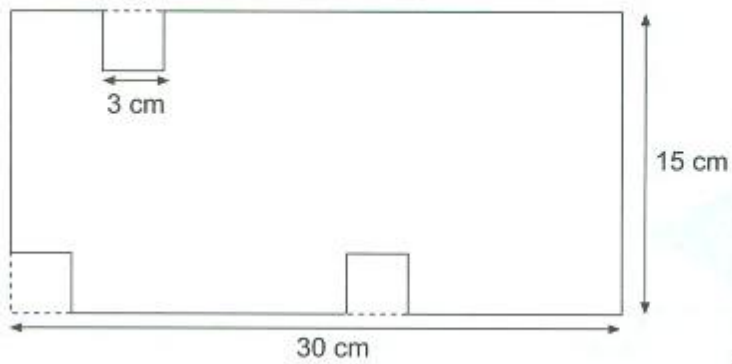
Ans: _____ cm

6. In the figure below, the lines meet at right angles. Find the perimeter of the figure.



Ans: _____ cm

7. The figure below shows a rectangle with 3 identical squares cut out. Find the perimeter of the remaining figure.



Ans: _____ cm

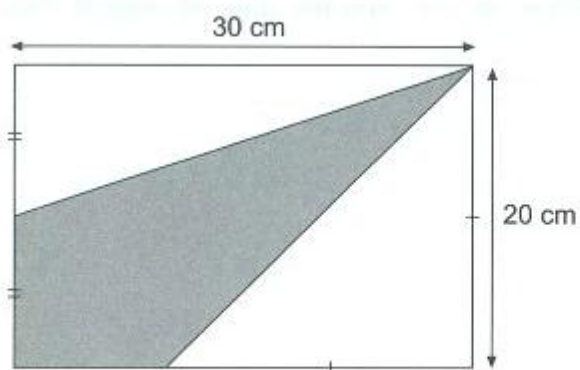
Answer

Q7) 102 cm

Q8) 250 cm²

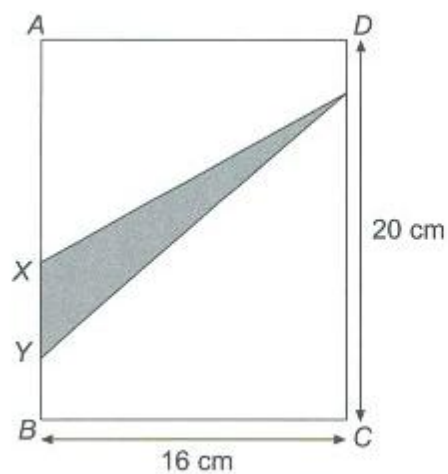
Q9) 40 cm²

8. The figure below shows a rectangle. Find the area of the shaded part.



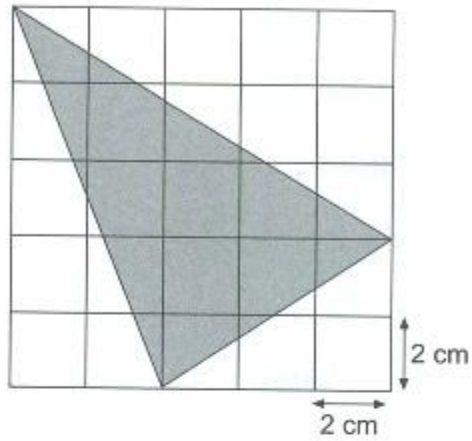
Ans: _____ cm²

9. In the figure below, $ABCD$ is a rectangle. The ratio of the length of XY to the length of AB is $1 : 4$. Find the area of the shaded triangle.



Ans: _____ cm²

10. The shaded triangle below is drawn on square grids of side 2 cm. Find the area of the shaded triangle.



Answer

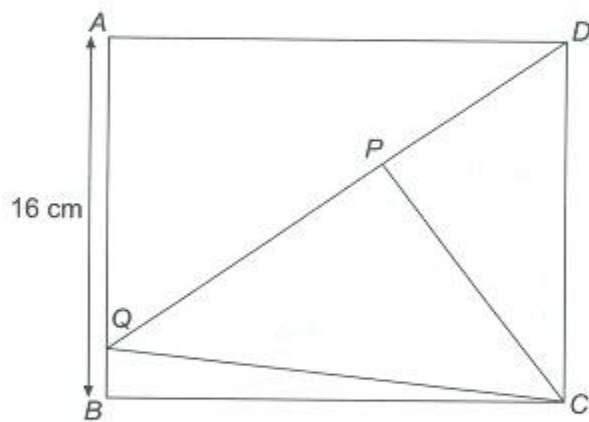
Q10) 38 cm^2

Q11) 104 cm^2

Q12) 250 cm^2

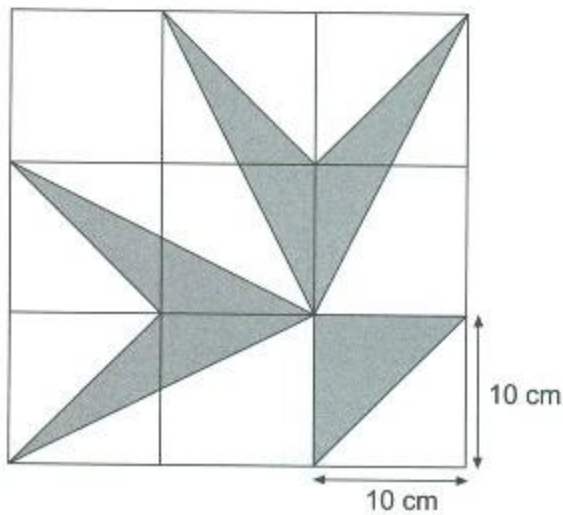
Ans: _____ cm^2

11. In the figure below, $ABCD$ is a rectangle. The perimeter of the rectangle is 72 cm. Given that the area of triangle CPD is 56 cm^2 , find the area of triangle PQC .



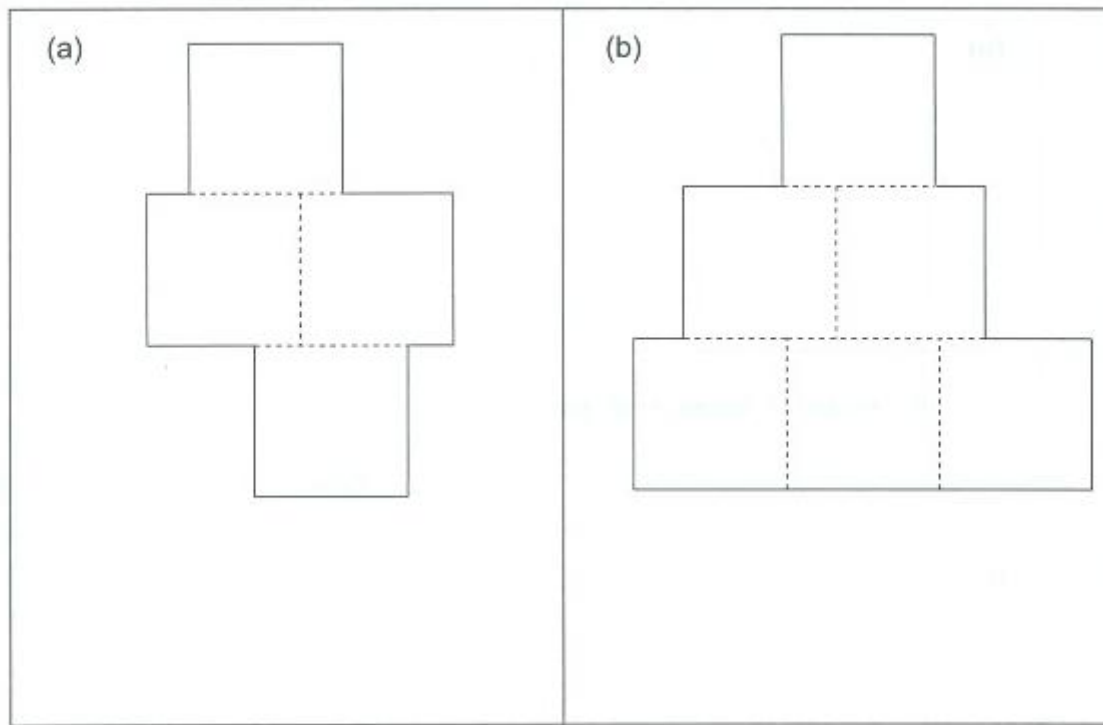
Ans: _____ cm^2

12. The figure below shows 9 identical squares of side 10 cm. Find the total area of the shaded parts.



Ans: _____ cm^2

13. Each of the figures below is made up of identical squares of side 5 cm. Find the perimeter of each figure.



Answer

Question 13

a) 50 cm

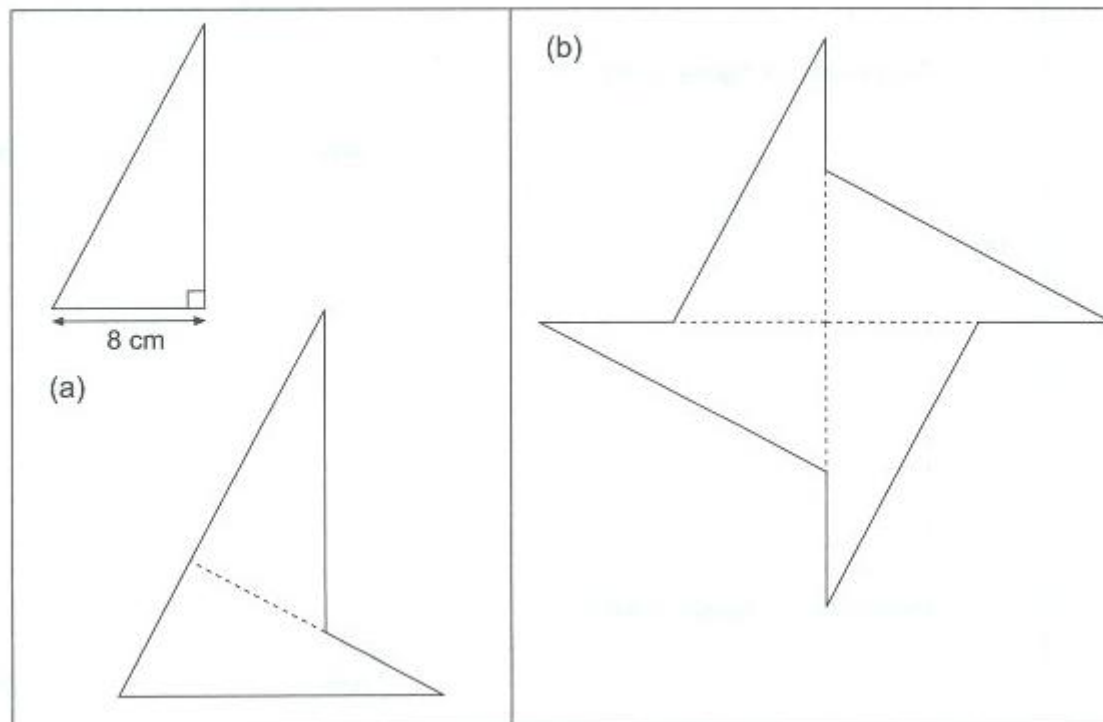
b) 60 cm

Question 14

a) 64 cm

b) 96 cm

14. Each of the figures below is made up of right-angled triangles of base 8 cm and perimeter 40 cm. Find the perimeter of each figure.

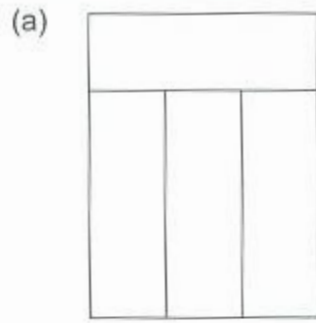


15. Each of the following figures is made up of identical rectangles. Find the area of each small rectangle in each figure.

Answer

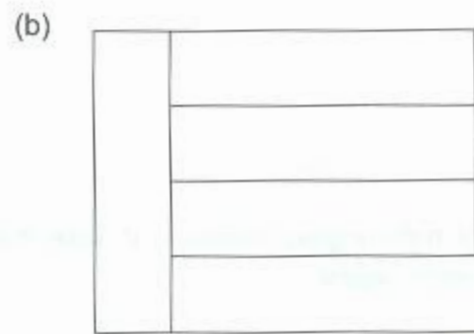
Question 15

- a) 48 cm^2
b) 100 cm^2
c) 32 cm^2



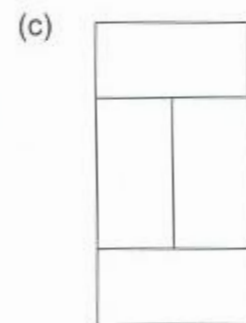
Perimeter of figure = 56 cm

Ans: _____ cm^2



Perimeter of figure = 90 cm

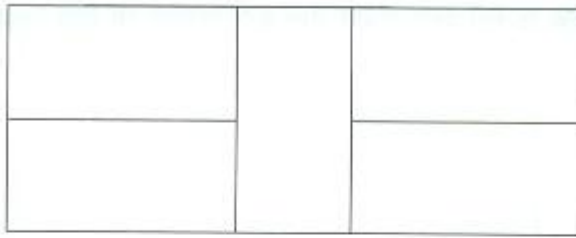
Ans: _____ cm^2



Perimeter of figure = 48 cm

Ans: _____ cm^2

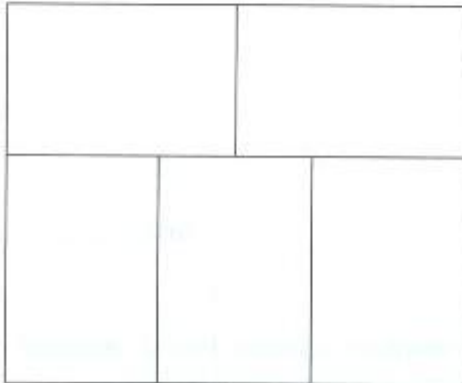
(d)



Perimeter of figure = 84 cm

Ans: _____ cm²

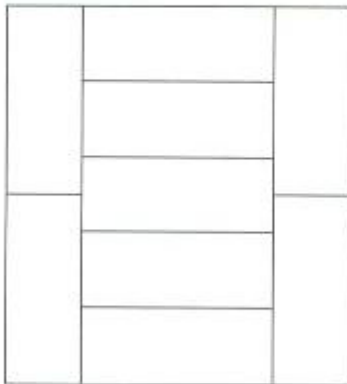
(e)



Perimeter of figure = 110 cm

Ans: _____ cm²

(f)



Perimeter of figure = 76 cm

Ans: _____ cm²
Answer

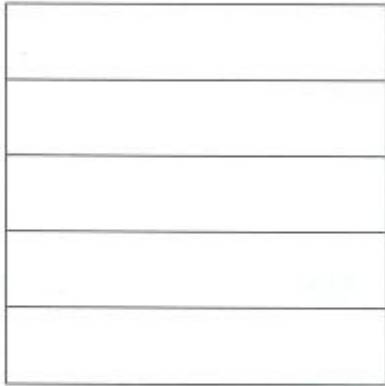
Question 15

d) 72 cm²

e) 150 cm²

f) 40 cm²

16. The figure below shows a square which is made up of 5 identical rectangles. The perimeter of each rectangle is 60 cm. Find the perimeter of the figure.



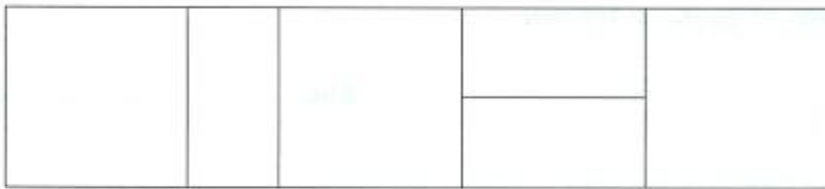
Answer

Q16) 100 cm

Q17) 648 cm²

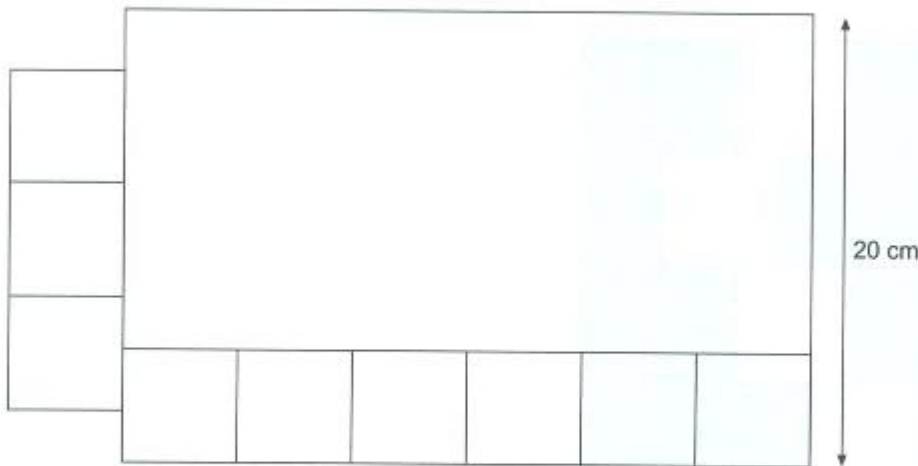
Ans: _____ cm

17. The figure below is made up of 3 identical squares and 3 identical rectangles. The perimeter of the figure is 132 cm. Find the area of the figure.



Ans: _____ cm²

18. The figure below is made up of 9 identical squares and a rectangle. The total area of the 9 squares is 225 cm^2 . Find the perimeter of the figure.



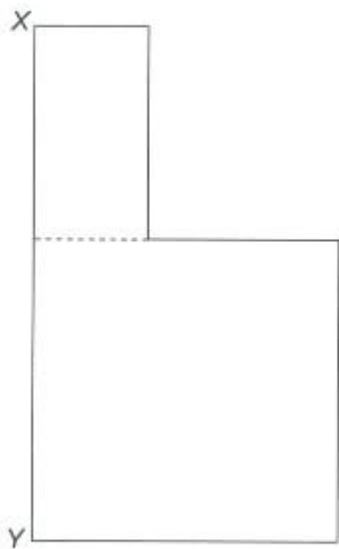
Answer

Q18) 110 cm

Q19) 41 cm

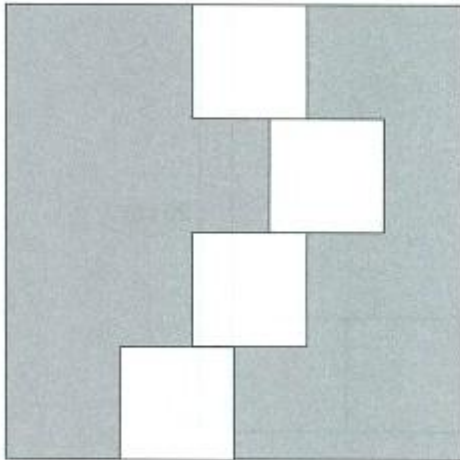
Ans: _____ cm

19. The figure below is made up of a square and a rectangle. The area of the square is 576 cm^2 and the perimeter of the figure is 130 cm. Find the length of XY.



Ans: _____ cm

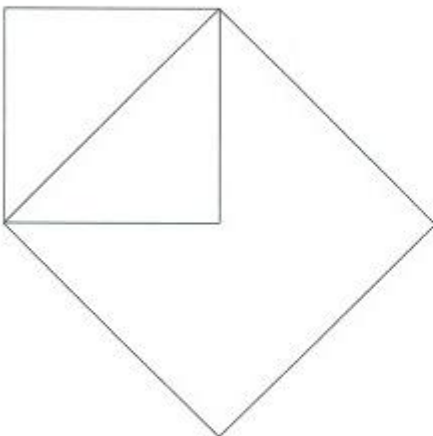
20. The figure below shows 4 identical squares which lie within a big square. If the area of the big square is 784 cm^2 , find the total area of the shaded parts of the figure.



Answer
Q20) 558 cm^2
Q21) 405 cm^2

Ans: _____ cm^2

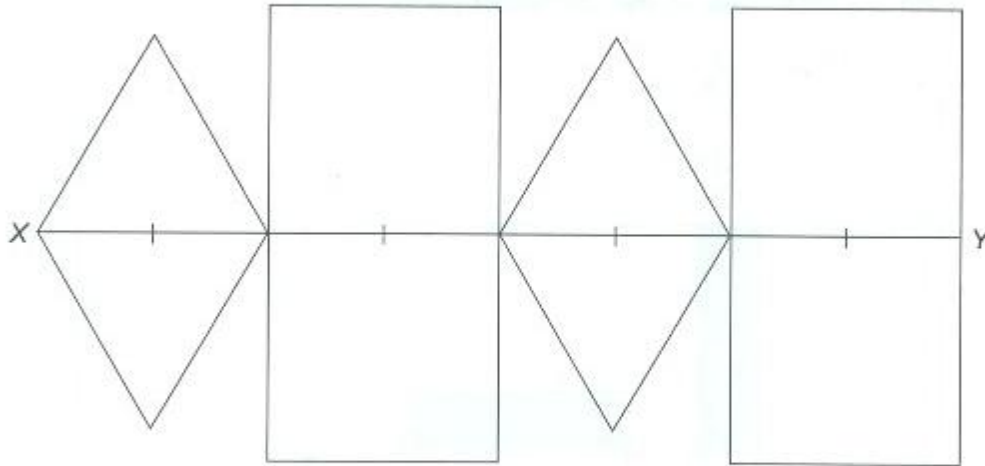
21. The figure below shows 2 different squares. The length of a side of the bigger square is 18 cm . Find the area of the figure.



Ans: _____ cm^2

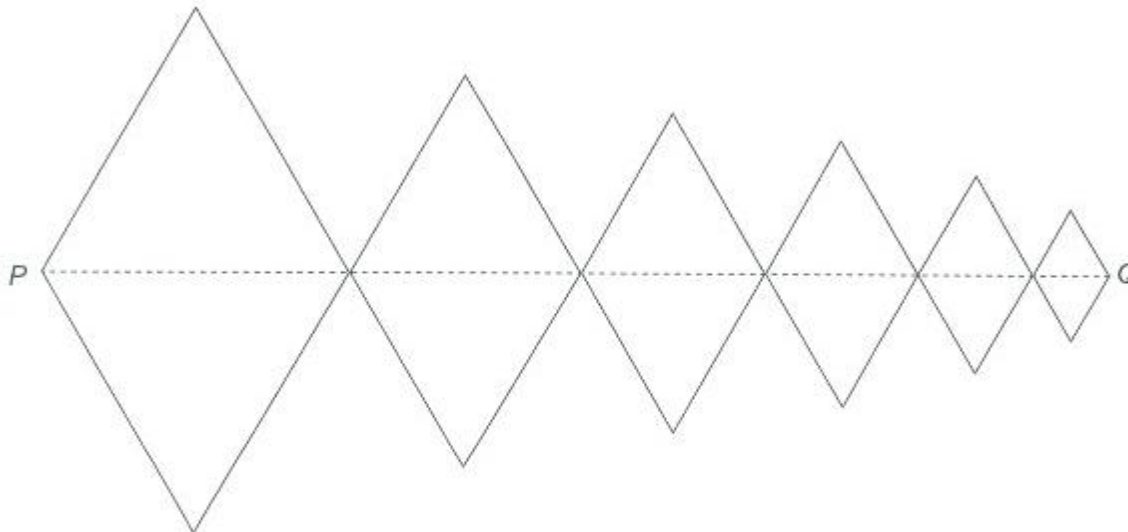
22. Marc bent a piece of wire of length 1.5 m to form the figure below. The figure is made up of 4 squares and 4 equilateral triangles. If the length of XY is 20 cm, how much wire did he have left?

Answer
Q22) 30 cm
Q23) 384 cm



Ans: _____ cm

23. The figure below is made up of 12 equilateral triangles. If the length of PQ is 96 cm, find the total perimeter of the figure.



Ans: _____ cm

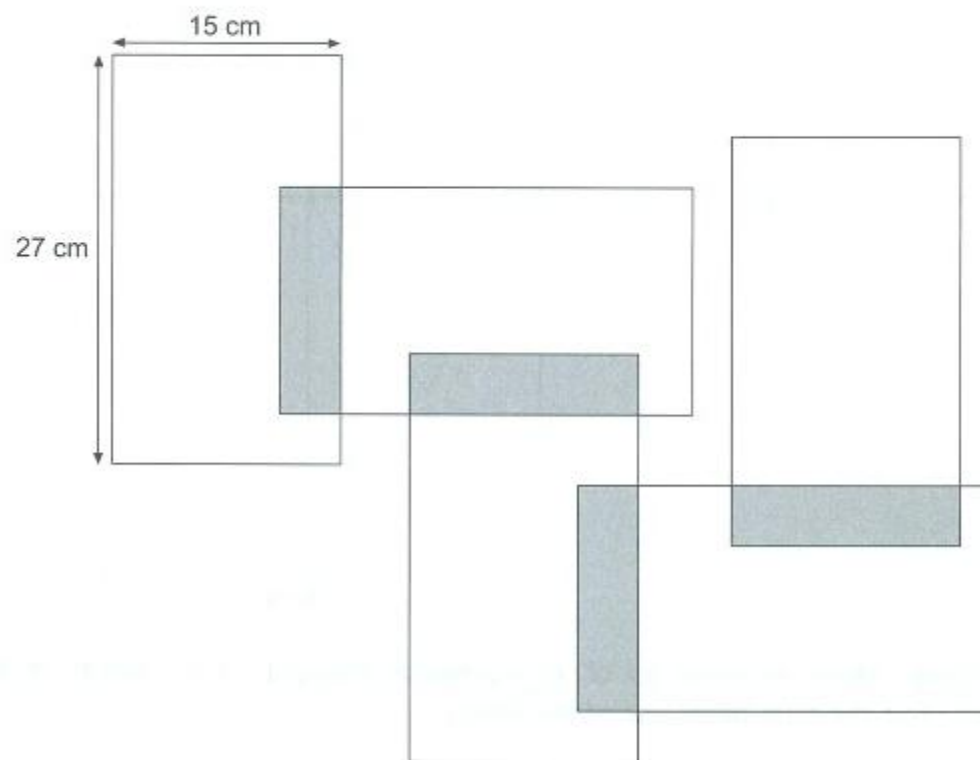
24. The figure below shows 5 identical rectangles overlapping each other equally. The perimeter of each identical shaded rectangle is 38 cm.
- (a) Find the area of the figure.
- (b) Find the total area of the unshaded parts.

Answer

Question 24

a) 1785 cm^2

b) 1545 cm^2

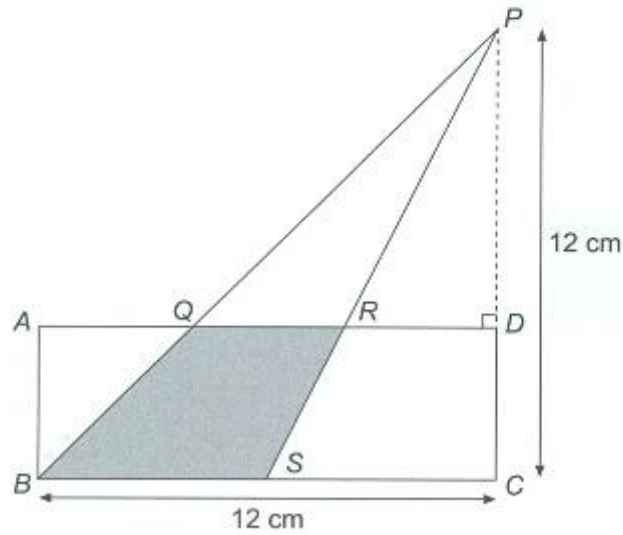


Ans: (a) _____ cm^2

(b) _____ cm^2

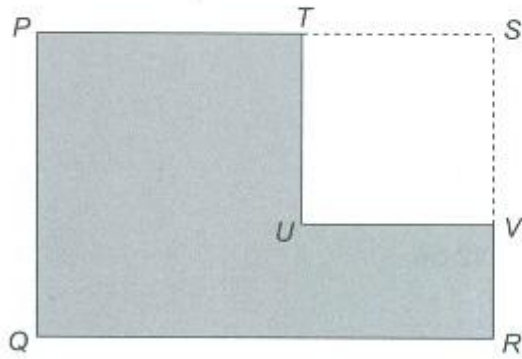
25. The figure below shows a rectangle $ABCD$ and a triangle PBS . $PC = BC = 12$ cm and S is the midpoint of BC . The area of the shaded part $BSRQ$ is $\frac{5}{9}$ of the area of triangle PBS . It is also $\frac{5}{12}$ of the area of rectangle $ABCD$. Find the length of AB .

Answer
Q25) 4 cm



Ans: _____ cm

26. The figure below shows a rectangle $PQRS$ with a square $STUV$ removed. The ratio of the length of QR to the perimeter of rectangle $PQRS$ is $3 : 10$. The length of QR is 4 cm longer than the length of PQ .
- (a) Find the perimeter of the shaded part.
- (b) If the area of the shaded part is 71 cm^2 , find the length of TU .

**Answer**

Question 26

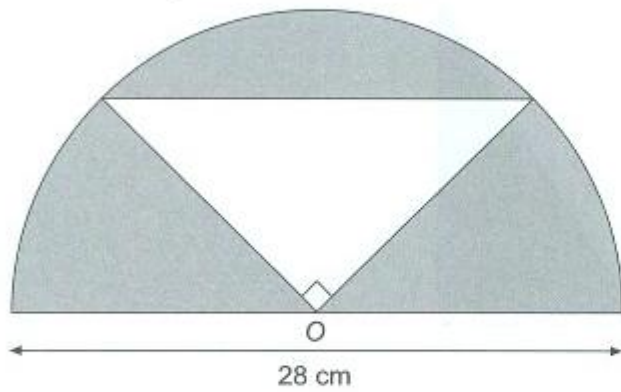
- a) 40 cm
b) 5 cm

Ans: (a) _____ cm

(b) _____ cm

27. The figure below shows a semicircle of diameter 28 cm. O is the centre of the semicircle. Find the total area of the shaded parts.

(Take $\pi = \frac{22}{7}$.)



Answer

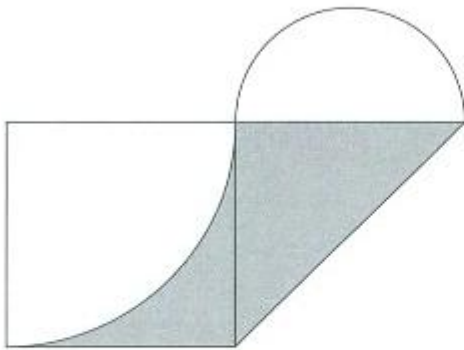
Q27) 210 cm²

Q28) 71.5 cm²

Ans: _____ cm²

28. The figure below shows a square, a quarter circle, a semicircle and a right-angled isosceles triangle. The radius of the semicircle is 5 cm. Find the total area of the shaded parts.

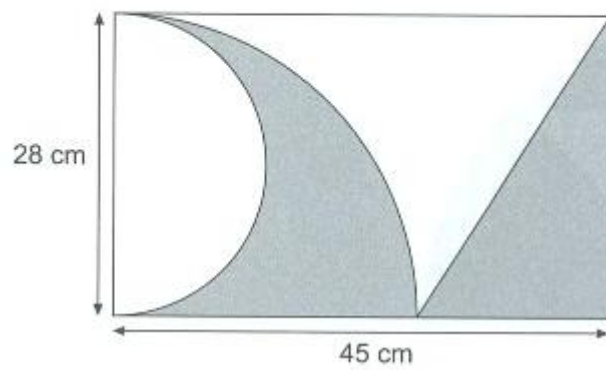
(Take $\pi = 3.14$.)



Ans: _____ cm²

29. The figure below shows a rectangle, a semicircle and a quadrant. Find the total area of the shaded parts.

(Take $\pi = \frac{22}{7}$.)



Answer

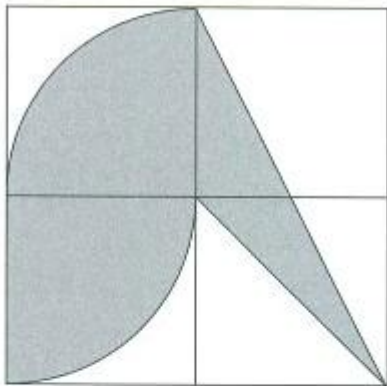
Q29) 546 cm²

Q30) 101.5 cm²

Ans: _____ cm²

30. The figure below shows 4 identical squares and 2 quarter circles. The radius of the quadrant is 7 cm. Find the total area of the shaded parts.

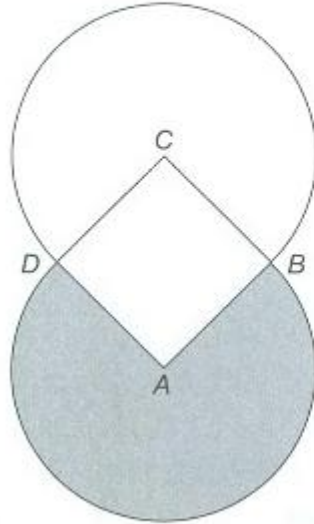
(Take $\pi = \frac{22}{7}$.)



Ans: _____ cm²

31. In the figure below, $ABCD$ is a square and A and C are the centres of the circles. The area of the square is 49 cm^2 .
- Find the perimeter of the figure.
 - Find the area of the shaded part.

(Take $\pi = \frac{22}{7}$.)



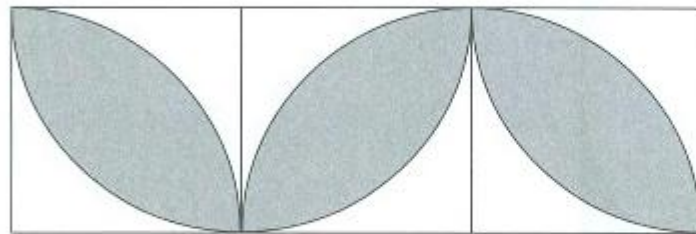
Ans: (a) _____ cm

(b) _____ cm^2

32. Timothy used a piece of wire to form the pattern shown below. The pattern consisted of identical squares and quadrants. The length of each side of the square is 14 cm .

- Find the total area of the shaded parts.
- How much wire did he use?

(Take $\pi = \frac{22}{7}$.)



Ans: (a) _____ cm^2

(b) _____ cm

Answer

Question 31

a) 66 cm

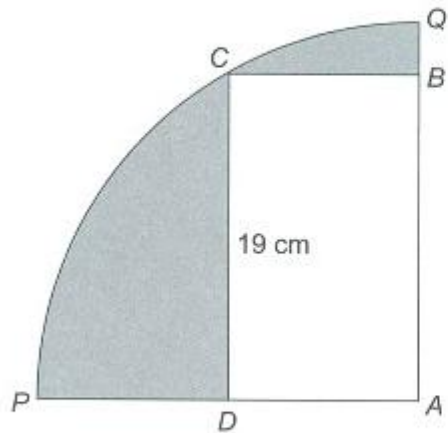
b) 115.5 cm^2

Question 32

a) 336 cm^2

b) 272 cm

33. The figure below shows a rectangle $ABCD$ and a quadrant APQ . The perimeter of the rectangle is 60 cm and $AD = DP$. Find the total area of the shaded parts.
(Take $\pi = 3.14$.)



Answer

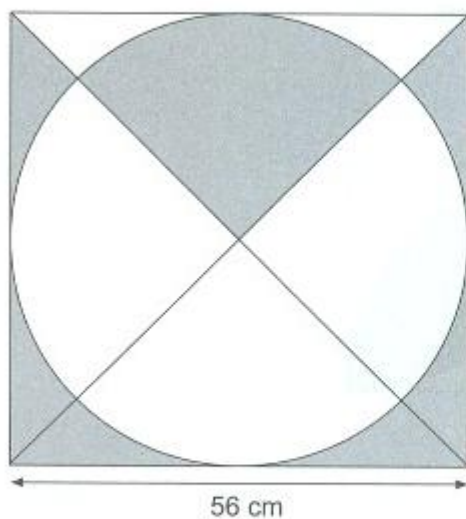
Q33) 170.94 cm²

Q34) 1120 cm²

Ans: _____ cm²

34. The figure below is made up of a square and a circle. Find the total area of the shaded parts.

(Take $\pi = \frac{22}{7}$.)



Ans: _____ cm²

35. The figure below is formed by a square and a semicircle. The total area of the shaded parts is 98 cm^2 . Find the perimeter of the figure.

(Take $\pi = \frac{22}{7}$.)



Answer

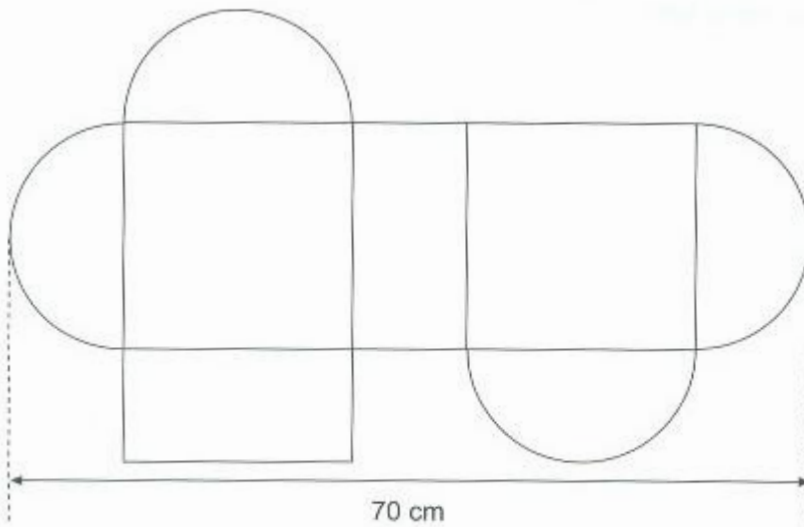
Q35) 64 cm

Q36) 1828 cm^2

Ans: _____ cm

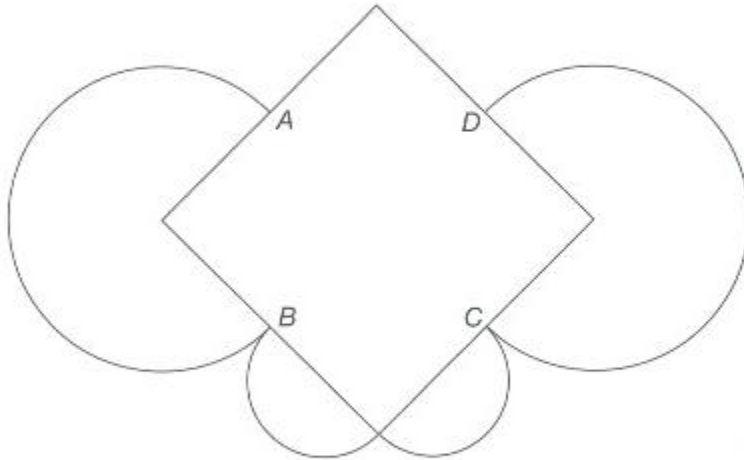
36. The figure below is made up of 2 identical squares, 2 identical rectangles and 4 identical semicircles. Find the area of the figure.

(Take $\pi = 3.14$.)



Ans: _____ cm^2

37. Linda used a piece of wire to form the shape shown below. A , B , C and D are the midpoints of the sides of the square. The area of the square is 100 cm^2 . Find the length of wire used by Linda.
(Take $\pi = 3.14$.)



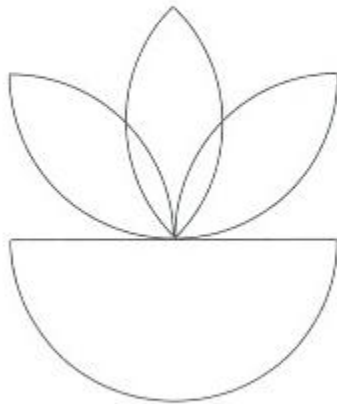
Answer

Q37) 102.8 cm

Q38) 48 cm

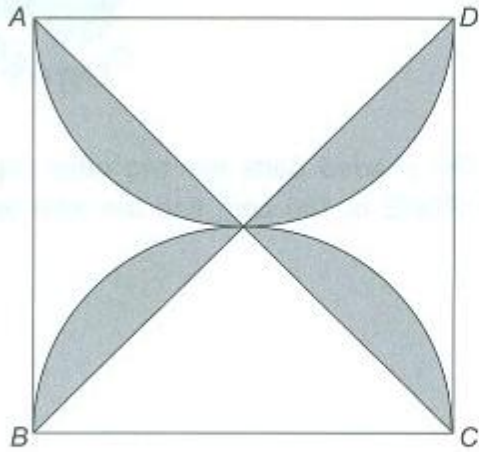
Ans: _____ cm

38. Melissa used a piece of wire of length 1.5 m to make the outline of the pattern shown below. The pattern is made up of the curved parts of 6 identical quadrants and a semicircle. The radii of the quadrant and the semicircle are 7 cm each. How much wire did she have left?
(Take $\pi = \frac{22}{7}$.)



Ans: _____ cm

39. The figure below shows a square $ABCD$ and 2 identical semicircles. The area of the square is 100 cm^2 . Find the total area of the shaded parts.
(Take $\pi = 3.14$.)



Answer

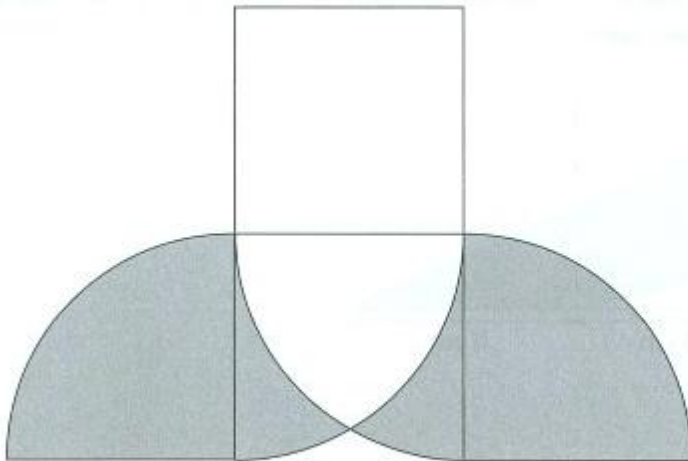
Q39) 28.5 cm^2

Question 40

- a) 49.68 cm
b) 68.84 cm^2

Ans: _____ cm^2

40. The figure below shows 4 identical quadrants and a square. The radius of each quadrant is 6 cm .
(a) Find the total perimeter of the shaded parts.
(b) If the area of the unshaded part is 58.1 cm^2 , find the total area of the shaded parts.
(Take $\pi = 3.14$.)



Ans: (a) _____ cm

(b) _____ cm^2