

Drill Exercise - 56

1. Fill in the blanks:

(i) If $P = ab - bc$
 $Q = bc - ca$
 $R = ca - ab$
 Then $P + Q + R = \dots\dots\dots$

(ii) If $P = a - b + ab$
 $Q = b - c + bc$
 $S = c - a + ac$
 Then $P + Q + S = \dots\dots\dots$

(iii) If $A = l^2 + m^2$
 $B = m^2 + n^2$
 $C = n^2 + l^2$
 Then $A - B - C = \dots\dots\dots$

(iv) If $A = lm + mn$
 $B = mn - lm$
 $C = lm - mn$
 Then $A - B - C = \dots\dots\dots$

(v) If $A = 2p^2q^2 - 3pq$
 $B = 3p^2q^2 + 2pq$
 $C = 5p^2q^2 - 5pq$
 Then $A - B - C = \dots\dots\dots$

(vi) If $B = bc + ca$
 $C = ca + ab$
 $A = ab + bc$
 Then $B + C + A = \dots\dots\dots$

(vii) If $P = a + b - ab$
 $Q = b + c - bc$
 $R = c + a - ab$
 Then $P + Q + R = \dots\dots\dots$

2. Fill in the blanks:

(i) $(a + 5) \times (b + 2) = \dots\dots\dots$
 (ii) $(x + 3) \times (y + 1) = \dots\dots\dots$
 (iii) $(p + 2) \times (q + 5) = \dots\dots\dots$
 (iv) $(l + 4) \times (m + 3) = \dots\dots\dots$

3. Fill in the blanks:

(i) $(x - 4) \times (y - 2) = \dots\dots\dots$
 (ii) $(a - 5) \times (b - 3) = \dots\dots\dots$
 (iii) $(x - 2) \times (y - 7) = \dots\dots\dots$
 (iv) $(l - 1) \times (m - 3) = \dots\dots\dots$

4. Fill in the blanks:

(i) $5x \times (3x + 2) = \dots\dots\dots$
 (ii) $2x \times (2x - 3) = \dots\dots\dots$
 (iii) $(5x - 2) \times 4x = \dots\dots\dots$
 (iv) $(3m + 2) \times 6m = \dots\dots\dots$

5. Fill in the blanks:

(i) $2p \times (l + 2m - 6n)$
 $= \dots\dots\dots$
 (ii) $5y \times (3x - 2y + 1)$
 $= \dots\dots\dots$
 (iii) $3x \times (x - 6x^2 - 3)$
 $= \dots\dots\dots$
 (iv) $(x^2 - 3x + 2) \times 6y$
 $= \dots\dots\dots$

Drill Exercise - 57

1. Fill in the blanks:

- (i) $(x - 2) \times (y + 1) = \dots\dots\dots$
(ii) $(2x + 3) \times (4x - 3) = \dots\dots\dots$
(iii) $(l + 3m) \times (n + 5) = \dots\dots\dots$
(iv) $(2pq - 4r) \times (6pr + 2q) = \dots\dots\dots$

2. Fill in the blanks:

- (i) $(a + 7) \times (a^2 + 2a - 5)$
 $= \dots\dots\dots$
(ii) $(a + b) \times (a - b + c)$
 $= \dots\dots\dots$
(iii) $(a + 3) \times (a^2 - 5a - 1)$
 $= \dots\dots\dots$
(iv) $(3x^2 - 2x + 5) \times (x - 3)$
 $= \dots\dots\dots$

3. Fill in the blanks:

- (i) $m \times (n + 2) \times (m + n - 1)$
 $= \dots\dots\dots$
(ii) $(a + 1) \times (a^2 + 2) \times (a^3 + a^2 + a)$
 $= \dots\dots\dots$
(iii) $(x^3 + 2x - 1) \times (x^2 + 2) \times x$
 $= \dots\dots\dots$
(iv) $5l \times (l^3 + 2l^2 - 5) \times (l - 1)$
 $= \dots\dots\dots$
(v) $lm \times (l^2m + 4) \times (m^2l - 1)$
 $= \dots\dots\dots$

4. Using the identity $(x + y)^2 = x^2 + 2xy + y^2$, fill in the blanks:

- (i) $(x + 2)^2 = \dots\dots\dots$
(ii) $(2x + 1)^2 = \dots\dots\dots$
(iii) $(l + 2m)^2 = \dots\dots\dots$
(iv) $(2x + y)^2 = \dots\dots\dots$
(v) $(x + 2p^2)^2 = \dots\dots\dots$
(vi) $(7l + 4m)^2 = \dots\dots\dots$
(vii) $(p + 3q)^2 = \dots\dots\dots$
(viii) $(10x + y)^2 = \dots\dots\dots$

5. Using the identity $(x - y)^2 = x^2 - 2xy + y^2$, fill in the blanks:

- (i) $(x - 1)^2 = \dots\dots\dots$
(ii) $(2x - 5)^2 = \dots\dots\dots$
(iii) $(x - 2y)^2 = \dots\dots\dots$
(iv) $(2l - 3m)^2 = \dots\dots\dots$
(v) $(3y + 6)^2 = \dots\dots\dots$
(vi) $(1 - 10m)^2 = \dots\dots\dots$
(vii) $(10m - 1)^2 = \dots\dots\dots$
(viii) $(5l - 3m)^2 = \dots\dots\dots$

Drill Exercise – 59

1. Using identity

$$(x + a)(x + b) = x^2 + (a + b)x + ab,$$

fill in the blanks:

- (i) $102 \times 103 = \dots\dots\dots$
- (ii) $102 \times 97 = \dots\dots\dots$
- (iii) $9.8 \times 10.1 = \dots\dots\dots$
- (iv) $8.1 \times 8.2 = \dots\dots\dots$
- (v) $97 \times 98 = \dots\dots\dots$
- (vi) $5.1 \times 5.2 = \dots\dots\dots$
- (vii) $104 \times 103 = \dots\dots\dots$

2. Using identity

$$(a + b)(a - b) = a^2 - b^2, \text{ fill in the blanks:}$$

- (i) $101 \times 99 = \dots\dots\dots$
- (ii) $98 \times 102 = \dots\dots\dots$
- (iii) $51 \times 49 = \dots\dots\dots$
- (iv) $51^2 - 49^2 = \dots\dots\dots$
- (v) $153^2 - 147^2 = \dots\dots\dots$
- (vi) $10.1^2 - 9.9^2 = \dots\dots\dots$
- (vii) $(-10.2)^2 - (9.8)^2 = \dots\dots\dots$
- (viii) $(4.01)^2 - (3.99)^2 = \dots\dots\dots$
- (ix) $(1.01)^2 - (0.99)^2 = \dots\dots\dots$
- (x) $(5.99)^2 - (4.01)^2 = \dots\dots\dots$

3. Using identities, fill in the blanks:

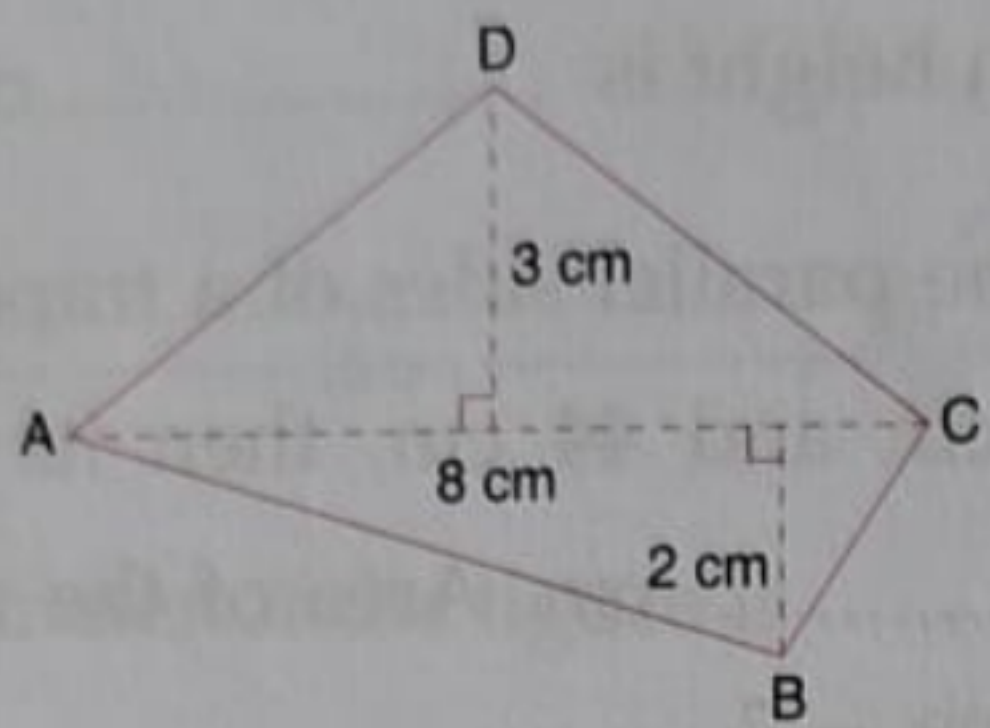
- (i) $(99)^2 = \dots\dots\dots$
- (ii) $(101)^2 = \dots\dots\dots$
- (iii) $(91)^2 = \dots\dots\dots$
- (iv) $(102)^2 = \dots\dots\dots$
- (v) $(998)^2 = \dots\dots\dots$
- (vi) $297 \times 303 = \dots\dots\dots$
- (vii) $98 \times 102 = \dots\dots\dots$
- (viii) $9.5 \times 10.5 = \dots\dots\dots$

4. Fill in the blanks:

- (i) $(4x + 3y)^2 - (4x - 3y)^2 = \dots\dots\dots$
- (ii) $\left(\frac{3}{2}x - \frac{2}{3}y\right)^2 + 2xy = \dots\dots\dots$
- (iii) $(3p + 7)^2 - 42p = \dots\dots\dots$
- (iv) $(9x - 5y)^2 + 90xy = \dots\dots\dots$
- (v) $(7p - 8q)^2 - (7p + 8q)^2 = \dots\dots\dots$
- (vi) $(2x + 5)^2 - (2x - 5)^2 = \dots\dots\dots$
- (vii) $(ab + bc)^2 - 2ab^2c = \dots\dots\dots$
- (viii) $(a - b)(a + b) + (b - c)(b + c) +$
 $(c - a)(c + a) = \dots\dots\dots$
- (ix) $a(b - c) + b(c - a) + c(a - b)$
 $= \dots\dots\dots$

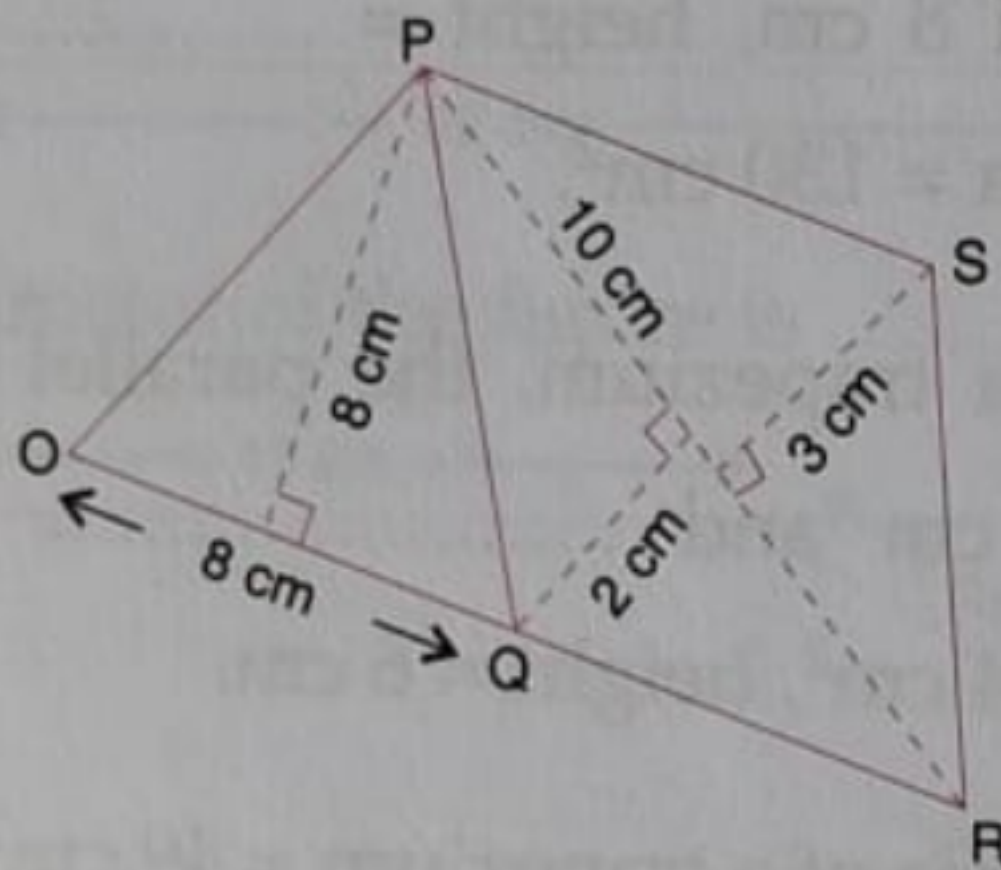
1. Fill in the blanks:

- (i) Area of the quadrilateral ABCD = cm^2 .



- (ii) Area of the quadrilateral PQRS = cm^2

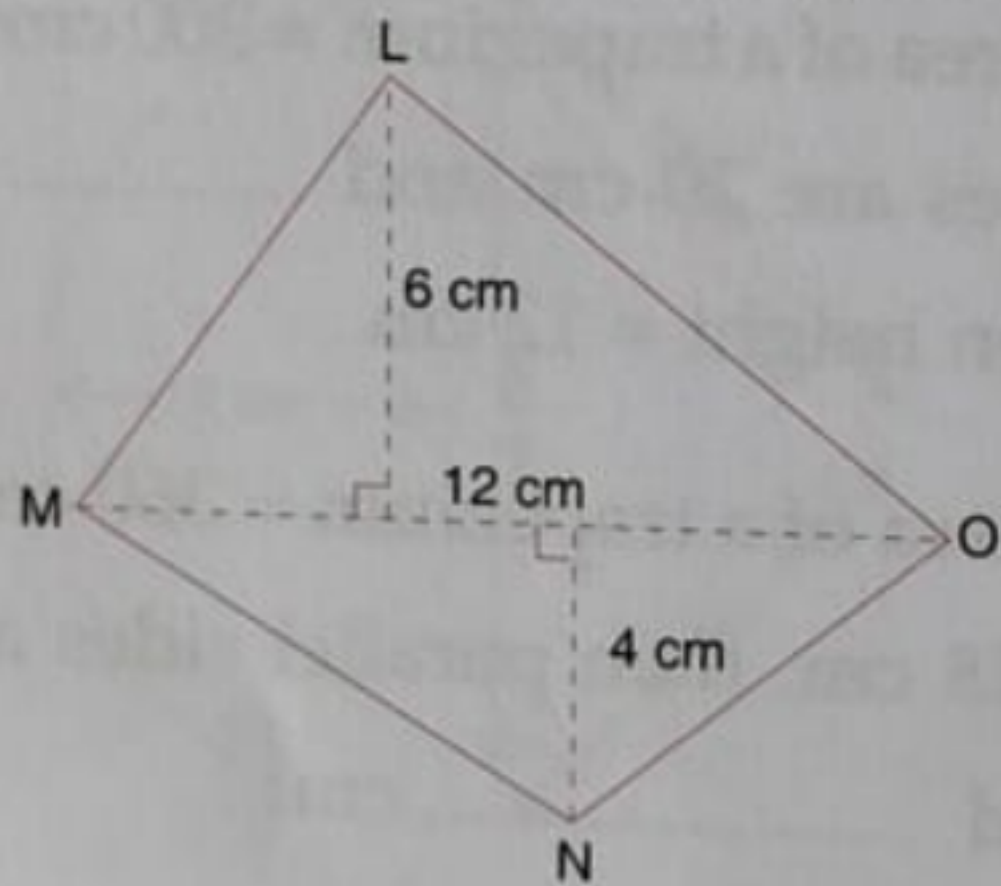
PQRS = cm^2



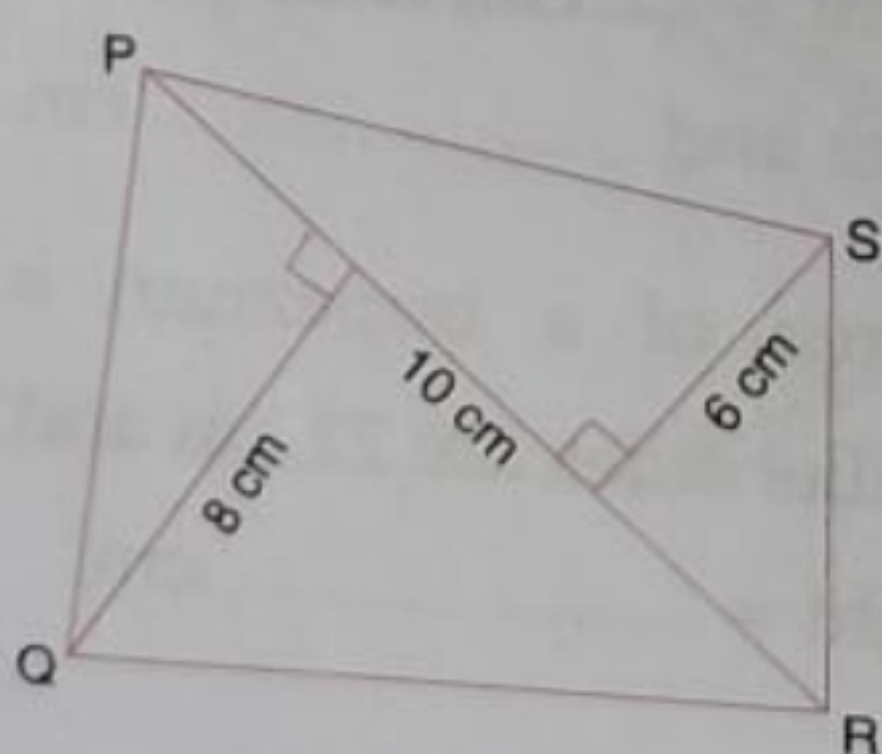
and area of $\triangle OPQ$ = cm^2 .

- (iii) Area of the quadrilateral LMNO = cm^2 .

LMNO = cm^2 .

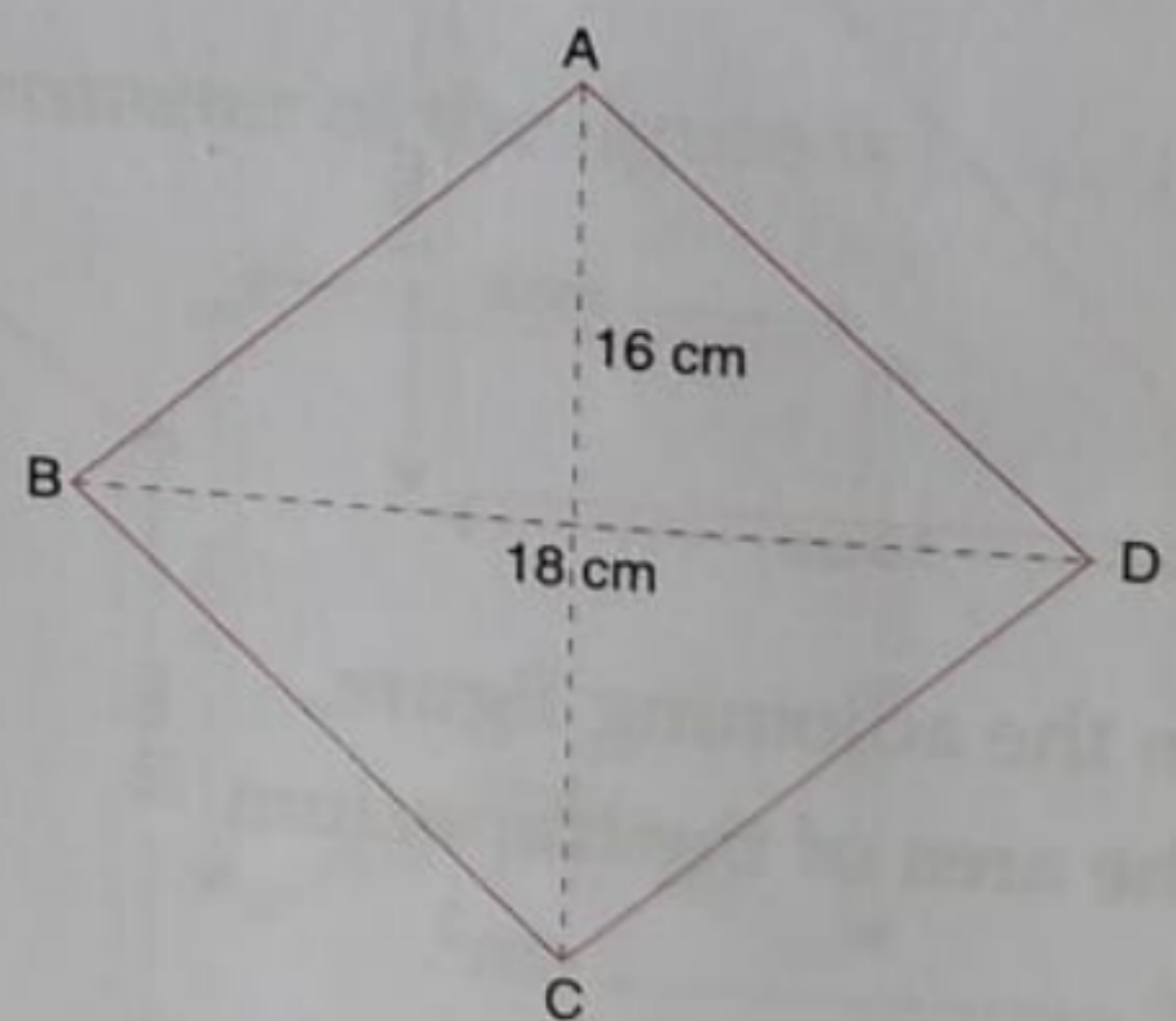


- (iv) Area of the quadrilateral PQRS = cm^2 .



2. Fill in the blanks:

- (i) The diagonals of a rhombus are 16 cm and 30 cm. Its area = cm^2 .
- (ii) Area of a rhombus is 240 cm^2 . If one of the diagonals is 30 cm, then another diagonal = cm.
- (iii) If area of a rhombus is 120 cm^2 and one of the diagonal = 10 cm, then the other diagonal = cm.
- (iv) If the diagonals of a rhombus are 12 cm and 7.5 cm, then its area = cm^2 .
- (v) Diagonals of a rhombus are 8 cm and 6 cm. Its area is cm^2 .
- (vi) Area of a rhombus is 252 cm^2 . If one of the diagonals measures 28 cm, then other diagonal = cm.
- (vii) Area of a rhombus is 96 sq. cm. If one of the diagonals is 16 cm, then the other diagonal = cm.
- (viii) Area of the rhombus ABCD = cm^2 .



1. Choose the correct answer and fill in the blanks:

(i) The area of four walls of a room
= × height of the room
[$2(l + b) / 2(l \times b)$]

(ii) The total surface area of a cuboid
= lateral surface area +
[$2 \times \text{area of base} / \text{area of base}$]

(iii) If the height, length and breadth of a box are 20 cm, 15 cm and 10 cm respectively, then the total surface area = cm^2 .
[$1300 \text{ cm}^2 / 650 \text{ cm}^2$]

(iv) Surface area of a cube
= (edge) 2 . [2 / 6]

(v) Lateral surface area of a cubical box
= (edge) 2 . [2 / 4]

(vi) Total surface area of a cube having edge as 3.5 cm is cm^2 .
[73.5 / 24.5]

(vii) Total surface area of a cube of side 8 cm is cm^2 .
[$128 \text{ cm}^2 / 384 \text{ cm}^2$]

(viii) The total surface area of a cuboid having length, breadth and height as l, b and h is
[$2lbh / 2(lb + bh + hl)$]

2. Fill in the blanks:

(i) Lateral surface area of a cube of edge 10 cm is cm^2 .

(ii) Lateral surface area of a cube of edge 8 cm is cm^2 .

(iii) Lateral surface area of a cuboid having length, breadth, height as 6 cm, 4 cm, 2 cm respectively is cm^2 .

(iv) Lateral surface area of a cuboid having length, breadth, height as 10 cm, 4 cm, 4 cm is cm^2 .

3. Fill in the blanks:

(i) Area of four walls of a room having length, breadth, height as 12 m, 8 m, 4 m respectively is m^2 .

(ii) Area of four walls of a room having length, breadth, height as 10 m, 9 m, 3 m respectively is m^2 .

(iii) Volume of a cuboid having length, breadth and height as 8 cm, 6 cm and 4 cm respectively is cm^3 .

(iv) Volume of a cube of edge 8 cm is cm^3 .

(v) The internal measures of a cuboid are 12 m × 8 m × 4 m. Its total surface area = m^2 .

Its volume is m^3 .

(vi) If total surface area of a cube is 600 cm^2 , then its edge = cm.