

Ex: 27.3.

$$\begin{array}{l}
 1. \quad \left. \begin{array}{l} \text{Area} = 20 \text{ cm}^2 \\ h = 4 \text{ cm} \\ b = 6 \text{ cm} \\ a = ? \end{array} \right\} \text{given}
 \end{array}$$

$$A = \frac{1}{2} (a+b)h$$

$$\frac{1}{2} (a+6) \times 4^2 = 20$$

$$a+6 = \frac{20}{2}$$

$$\begin{array}{l}
 a = 10 - 6 \\
 = \underline{\underline{4 \text{ cm}}}
 \end{array}$$

$$2. \quad \text{Area of trapezium} = \frac{1}{2} (a+b)h$$

$$a = 6 \text{ cm}, b = 12 \text{ cm}, h = 4 \text{ cm}$$

$$A = \frac{1}{2} (6+12) \times 4$$

$$= 36 \text{ cm}^2$$

$$\text{Area of parallelogram} = \text{Area of trapezium (given)}$$

$$12x = 36$$

$$x = 3$$

$$= \underline{\underline{3 \text{ cm}}}$$

3. Area of the brick work = Area of trapezium - Area of rectangle.

$$a = 6\text{m}, b = 4\text{m}, h = 5\text{m}$$

$$\text{Area of trapezium} = \frac{1}{2} (6+4) \times 5$$

$$= 25\text{m}^2$$

$$\text{Area of rectangle (door)} = lb \quad (l=2\text{m}, b=0.75\text{m given})$$

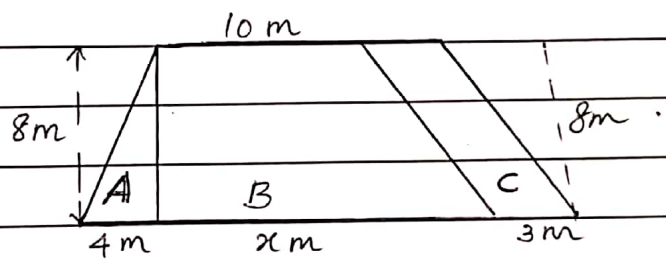
$$= 2 \times 0.75$$

$$= 1.5\text{m}^2$$

$$\therefore \text{Area of the brick work} = 25\text{m}^2 - 1.5\text{m}^2$$

$$\text{(shaded part)} = \underline{\underline{23.5\text{m}^2}}$$

4.



a) (A and C are flower beds.)

$$\text{Area of A} = \frac{1}{2} bh \quad b=4\text{m}, h=8\text{m}$$

$$= \frac{1}{2} \times 4 \times 8$$

$$= \underline{\underline{16\text{m}^2}}$$

$$\text{Area of C} = bh \quad b=3\text{m}, h=8\text{m}$$

$$= 3 \times 8$$

$$= \underline{\underline{24\text{m}^2}}$$

b) Area of grass (B) = 2.5 \times \text{total area of flower beds (given)}

$$= 2.5 (16+24) = \underline{\underline{100\text{m}^2}}$$

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c. Area of trapezium (grass) =  $100 \text{ m}^2$  (Ans. b)

$$\frac{1}{2} (x + 10) \times 8 = 100$$

$$x + 10 = \frac{100}{4} \\ = 25$$

$$x = 25 - 10 \\ = \underline{\underline{15 \text{ m}}}$$