

CHAPTER 19

AREA OF 2-D SHAPES

More Questions for Practice

1. In Fig. 19.1, ABCD is a trapezium with $AD \parallel BC$, $AB \parallel DG$, $AD = 10$ cm, $BC = 20$ cm, $AF = 7$ cm and $AB = DC$. Calculate:

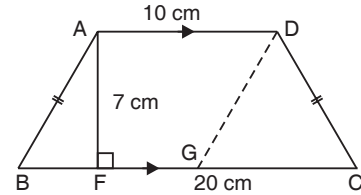


Fig. 19.1

- the area of the trapezium ABCD.
- the area of the parallelogram ABGD.
- the area of the ΔDGC .

2. In Fig. 19.2, PQRS is a trapezium with $PS \parallel QR$, $PS = 8$ cm, $QR = 18$ cm and $ar(\Delta STR) = 30$ sq cm. If $PQ \parallel ST$, find:

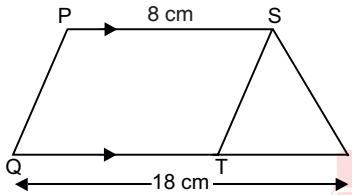


Fig. 19.2

- the height of S above TR.
- the area of the trapezium PQRS.

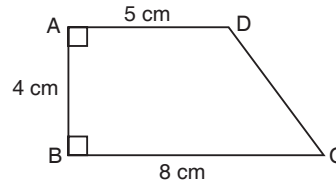


Fig. 19.3

3. In Fig. 19.3, $\angle ABC = \angle DAB = 90^\circ$, $BC = 8$ cm, $AB = 4$ cm and $AD = 5$ cm, calculate:
- the area of the trapezium ABCD.
 - the length of DC.

4. In Fig. 19.4, $AF \parallel CD$, $BC = ED$, $\angle BCD = \angle CDE = 90^\circ$. If $BC = 7$ cm, $CD = 10$ cm, $AF = 4$ cm and the height of F above CD is 12 cm, calculate:

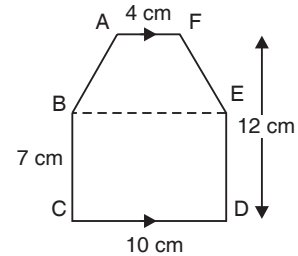
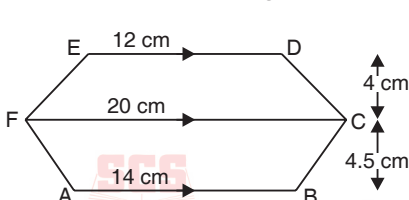


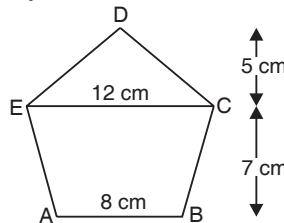
Fig. 19.4

- the area of ABEF.
- the area of ABCDEFA.

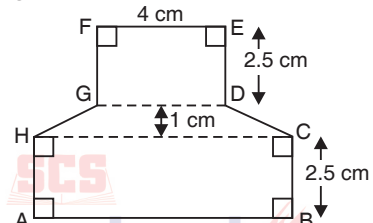
- The area of a trapezium is 120 sq cm and the perpendicular distance between its parallel sides is 8 cm. Find the lengths of the parallel sides, their difference being 6 cm.
- The average length of the bases of a trapezium is 105 cm. Find the area of the trapezium, if its altitude is 99 cm.
- Find the area of the region enclosed by each of the following figures:



(i)



(ii)



(iii)

Fig. 19.5

ANSWERS

1. (i) 105 sq cm (ii) 70 sq cm (iii) 35 sq cm
2. (i) 6 cm (ii) 78 sq cm
3. (i) 26 sq cm (ii) 5 cm
4. (i) 35 sq cm (ii) 105 sq cm
5. 12 cm, 18 cm
6. 10395 sq cm
7. (i) 140.5 sq cm (ii) 100 sq cm (iii) 36 sq cm.

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