1. If the difference between the compound interest and simple interest on a certain sum of money for 2 years at $12\frac{1}{2}\%$ per annum is Rs. 150. Find the sum.

2. Suresh borrowed Rs. 16000 from Ramesh at 10% simple interest for $1\frac{1}{2}$ years. After 2 years, when Suresh was clear to debt, Ramesh insisted Suresh to pay him compound interest (compounded half yearly). How much more than Suresh pay ?

3. Find the rate of interest for a sum that becomes $\frac{729}{625}$ times of itself in 2 years, when compounded annually.

4. In what time will Rs. 2000 amount to Rs. 2662 at 20% per annum compounded half yearly ?

5. Find the sum which amounts to Rs. 1352 in 2 years at 4% compound interest.

6. On a scale of map 0.7 cm represents 8.4 km. If the distance between on the map is 4.65 cm, what will be the actual distance between the points ?

7. In a library, 136 copies of a certain books require a shelf-length of 3.4 m. How many copies of the same book would occupy a shelf-length of 5.1 m ?

8. 14 pumps of equal capacity can fill a tank in 6 days. If the tank has to be filled in 4 days, how many extra pumps are required to fill the same tank ?

9. In a factory, 600 men had provisions for 180 days. After 40 days, 100 men left the fort. How far will the remaining food last for ?

10. 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons working 6 hours a day, complete the work ?

11. Ratan has first enough money to buy 30 cycles worth Rs. 6000 each. How many cycles will he be able to buy if the cost of each cycle increases by Rs 1500.

12. A builder appoints three construction workers Akash, Sunil and Rakesh on one of his sites. They take 20, 30 and 60 days respectively to do a piece of work. How many days will it take Akash to complete the entire work if he is assisted by Sunil and Rakesh every third day ?

13. A tap can empty a tank in one hour. A second tap can empty it in 30 minutes. If both the taps operate simultaneously, how much time is needed to empty the tank ?

14. An inlet pipe fill the empty tank in 20 hours and an outlet pipe empty the filled tank in 16 hours. How much time is needed to fill the tank if both pipes work simultaneously ?.

15. A can do $\frac{2}{3}$ of a certain work in 12 days and B can do $\frac{1}{6}$ of the same work in 4 days. In how many days both A and B together complete the work ?

16. The perimeter of a parallelogram is 1800 cm. One of its sides is greater than the other by 30 cm. Find the length of the sides of the parallelogram.

17. The side and one diagonal of rhombus are 17 cm and 16 cm respectively. Find the area of the rhombus.

18. Show that the opposite sides and opposite angles of a parallelogram are equal.

19. In kite $PQRS$, $\angle SRT = 24^0$ and $\angle TSP = 53$. Find $\angle SPT$ and $\angle PSR$.
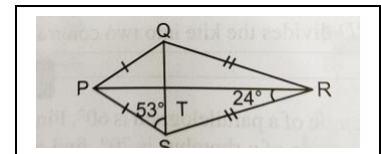
20. In a square $ABCD$, $AC = (7x - 2)$ and $BD = (11x - 10)$cm. What will be the perimeter of the square ?

21. The parallel sides of a trapezium are 25 cm and 13 cm, its non parallel sides are equal, each being 10 cm. Find the area of trapezium.
22. The parallel sides of a trapezium are 6 cm and 14 cm respectively. If the length of non-parallel sides are 5 cm and 7 cm. Find the area of trapezium.

23. Find the area of regular hexagon of side 8 cm each.
24. Diagonal AC of a rhombus $ABCD$ is equal to one of its sides BC. Find all the angles of the rhombus.
25. Find the area of the given figure.
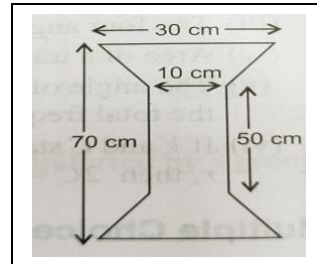
26. The area of a quadrilateral is 246 cm². The perpendicular from the opposite vertices on a diagonal of the quadrilateral are 6.8 m and 9.6 m. Find the length of the diagonal.
27. Construct a quadrilateral $ABCD$ in which $AB = 6\ cm$, $BC = 5cm$, $\angle A = 55^0$, $\angle B = 110^0$ and $\angle D = 90^0$.
28. Construct a parallelogram $ABCD$ so that $AB = 4.5\ cm$, $BC = 3.7\ cm$ and height = 2.5 cm.
29. Construct a rhombus $ABCD$ in which $AC = 7\ cm$ and $BD = 5\ cm$.
30. Construct a trapezium $ABCD$ in which $AB \parallel CD$ and $AB = 8\ cm$, $BC = 4\ cm$, $CD = 3.5\ cm$ and $DA = 4.2\ cm$.
31. Construct a trapezium $ABCD$ when one of the parallel sides $AB = 6\ cm$, height = 3.5 cm, $BC = 4\ cm$ and $AD = 4.7\ cm$.
32. Plot the following points on a Cartesian plane :
    A (3, 4) B (-5, -7) C (6, -4) D (-4, 5)
33. Write the number of quadrant in which the following points lie :
    A (-8, -15) B (-15, 4) C (0, -7) D (7, -9)
34. Draw the graph of the following functions :
    (i) $y = 3x$ (ii) $y = 5x - 3$
35. In the given figure, AB and CD are parallel sides of a trapezium $ABCD$ and $\angle ADC = 90^0$. Given $AB = 15\ cm$, $CD = 40\ cm$ and diagonal $AC = 41\ cm$, calculate the area of trapezium $ABCD$.