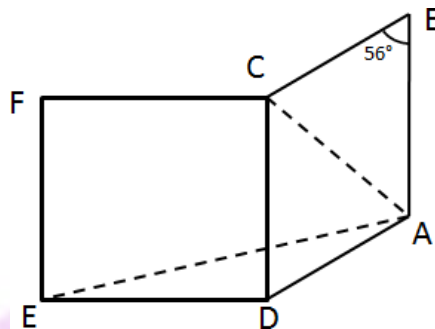


ICSE Class 9 Maths Important Questions

- Rationalise the denominator: $\frac{2\sqrt{5} + 3\sqrt{2}}{2\sqrt{5} - 3\sqrt{2}}$
- Two circles touch externally. The sum of their areas is 130π sq. cm and the distance between their centres is 14 cm. Find the radii of the circles.
- A car manufacturing company increases the production of a particular type of car in 2 years from 2,16,000 to 3,11,040. Find the annual rate of growth of production.
- In the following figure, ABCD is a rhombus and DCFE is a square.



If $\angle ABC = 56^\circ$, find

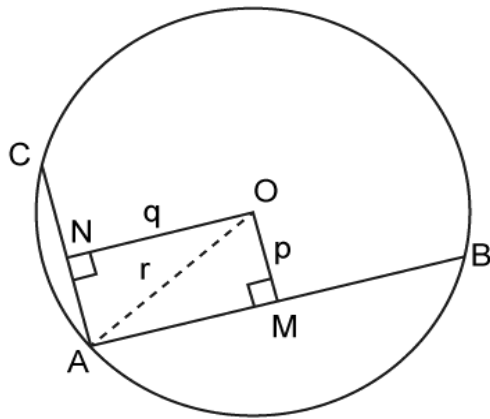
(i) $\angle DAE$ (ii) $\angle FEA$ (iii) $\angle EAC$ (iv) $\angle AEC$

- Solve using cross-multiplication:

$$4x + 3y = 17$$

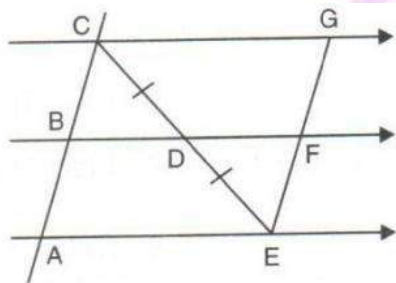
$$3x - 4y + 6 = 0$$

- If $2 \cos^2 \theta \sin \theta - 2 = 0$ and $0^\circ \leq \theta \leq 90^\circ$, find the value of θ .
- AB and AC are two chords of a circle of radius r such that $AB = 2AC$. If p and q are the distances of AB and AC from the centre, then prove that $4q^2 = p^2 + 3r^2$.



8. Find the point on the x-axis which is equidistant from the points $A(-2, 5)$ and $B(2, -3)$
9. Construct a regular hexagon of side 2.5 cm.
10. If $x + y - z = 4$ and $x^2 + y^2 + z^2 = 30$, then find the value of $xy - yz - zx$.

11. Use the adjoining figure to find,



- i. BC, if $AB = 8.6$ cm
- ii. GE, if $FE = 6$ cm
- iii. AE, if $BD = 3.6$ cm
- iv. DF, if $CG = 15$ cm

12. Prove that the perimeter of a triangle is greater than the sum of its three medians.
13. If the mean of five observations $x, x + 2, x + 4, x + 6, x + 8$ is 13, find the value of x , and hence, find the mean of the last three observations.
14. If the mean of five observations $x, x + 2, x + 4, x + 6, x + 8$ is 13, find the value of x , and hence, find the mean of the last three observations.

15. A cuboidal water tank is 6 m long, 5 m wide and 4.5 m deep. How many litres of water can it hold?

(Given $1 \text{ m}^3 = 1000 \text{ litres}$)

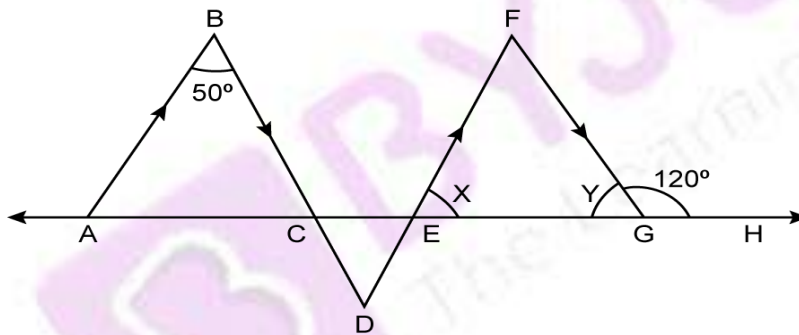
16. If P is the centre of the circle with radius 6.7 cm, $d(P, Q) = 7.6 \text{ cm}$, $d(P, R) = 5.7 \text{ cm}$, find the positions of points R and Q.

17. Solve the following simultaneous equations using the graphical method:

$$x + y = 8; x - y = 2$$

18. The line segments joining the mid-points M and N of parallel sides AB and DC, respectively, of a trapezium ABCD is perpendicular to both sides AB and DC. Prove that $AD = BC$.

19. In the given figure, $AB \parallel DE$ and $BD \parallel FG$ such that $\angle ABC = 50^\circ$ and $\angle FGH = 120^\circ$. Find the values of x and y. [3]



20. Each equal angle of an isosceles triangle is less than the third angle by 15° . [3] Find the angles.