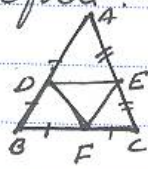


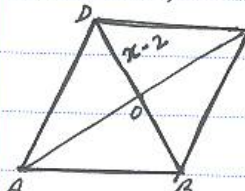
Choose the correct answer.

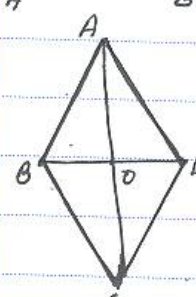
1. Which of the following has two pairs of adjacent sides equal? (a) Parallelogram (b) Rectangle (c) Trapezium (d) Kite

2.  D, E and F are the midpoints of the sides of $\triangle ABC$ as shown in the figure. If $DF = 5\text{cm}$ then $AC =$ ____ (a) 2.5cm (b) 6cm (c) 10cm

3. Which of the following equation does not pass through the origin? (a) $y = 3x$ (b) $x + y = 5$ (c) $x - y = 0$ (d) $x = 4y$

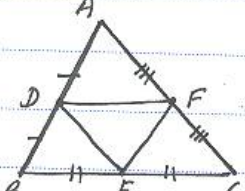
4. An equation of the form $y = k$ represents a line parallel to the x axis and it meets the y axis at (a) (0, k) (b) (k, 0) (c) (0, 0)

5.  ABCD is a $\parallel^m$. Diagonals meet at O. If $BD = 10\text{cm}$ and $AC = 12\text{cm}$, the value of x is ____ (a) 7cm (b) 8cm (c) 10cm

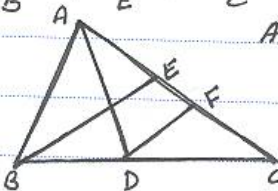
6.  ABCD is a rhombus. Diagonals AC and BD meet at O such that $AC = 48\text{cm}$ and $BD = 14\text{cm}$. Find the perimeter of Rhombus ABCD.

(7) The adjacent angles of a parallelogram are in the ratio 2:3. Find the angles of the $\parallel^m$.

8. One of the diagonals of a rhombus is equal to the sides. Find the angles of the rhombus.

9.  D, E and F are the midpoints of the sides of $\triangle ABC$.

Prove that perimeter of $\triangle DEF = \frac{1}{2}$ perimeter of $\triangle ABC$.

10.  AD and BE are medians of $\triangle ABC$

and $BE \parallel DF$. Prove that $CF = \frac{1}{4} AC$

(11) Represent Geometrically:

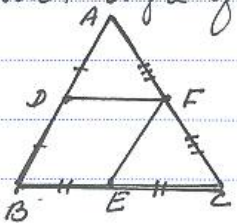
$2x + 5 = 4x + 1$ (a) on number line

(b) in Cartesian plane.

11. Diagonals of a square are equal and bisect each other at right angles. Prove.

12. If the diagonals of a $\parallel^m$ are equal, prove that it is a rectangle.

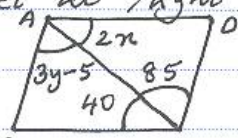
13. Each angle of a rectangle is a right angle. Prove.

14.  D, E and F are the midpoints of the sides AB, BC and AC of $\triangle ABC$.

Prove that $\square BEFD$ is a $\parallel^m$.

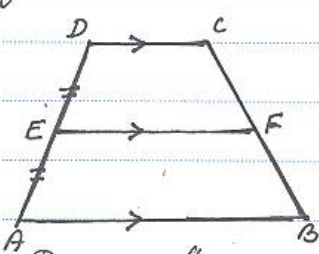
15. Draw the graph of the following equation (a) $x - y = 0$ (b) $x + y = 0$ (c) $\frac{x}{2} + \frac{y}{3} = 2$
(d) $2(x + y) + 3 = 3(x - y) - 7$

15. The bisectors of two adjacent angles of a $\parallel^m$ meet at right angles. Prove.

16.  ABCD is a $\parallel^m$. Find the value of x and y.

17. ABCD is a trapezium which $AB \parallel CD$ and $AD = BC$. Prove that $\angle A = \angle B$.

18. If the point $(2m, m+1)$ lies on the line $2x + 3y = 10$ find the value of m.

19.  ABCD is a trapezium. $AB \parallel EF \parallel CD$. E is the midpoint of AD.

Prove that: (i) F is the midpoint of BC.

$$(ii) EF = \frac{1}{2} (AB + CD)$$

20. Draw the graphs of $x + 3y = 6$ and $2x - 3y = 12$ on the same graph sheet. Find the vertices and area of the triangle formed between the two lines representing the equations and the Y axis.

21. Draw the graph of $\frac{x}{2} + \frac{y}{3} = 2$. Find the points where the line representing the equation meets:
(a) X axis. (b) Y axis.

