Write the equation for the perpendicular bisector of B (6,6) and C (6,0) .

Solution:

1). The equation of the line passing through the points B and A

$$\frac{x-x_A}{x_B-x_A}=\frac{y-y_A}{y_B-y_A}$$

$$\frac{x-6}{6-6}=\frac{y-6}{0-6}$$

$$x=6$$

This line is parallel to the y axis, so that the line is perpendicular to it must be parallel to the x-axis

2). If the point M is the midpoint of AB, then

$$x_M=\frac{x_A+x_B}{2}=\frac{6+6}{2}=6$$

$$y_M=\frac{y_A+y_B}{2}=\frac{6+0}{2}=3$$

M(6,3)

The equation of the line passing through the points M(6,3) and parallel to the x-axis is

$$y=3$$