

3 A line, l , joins point $F(3, 2)$ and point $G(-5, 4)$.

(a) Calculate the length of line l .

..... [3]

(b) Find the equation of the perpendicular bisector of line l in the form $y = mx + c$.

$y =$ [5]

(c) A point H lies on the y -axis such that the distance $GH = 13$ units.

Find the coordinates of the two possible positions of H .

(.....,) and (.....,) [4]