Perpendicular Lines Exam Practice

Q1. A line has the equation $2x + 3y = 15$. Find the equation of the line which is perpendicular to this line, and passes through the point (-18,10)

(3 marks)

Q2. A line segment AB has end-points (3, -8) and (15, 20). Find the equation of the line which is the perpendicular bisector of AB.

(4 marks)

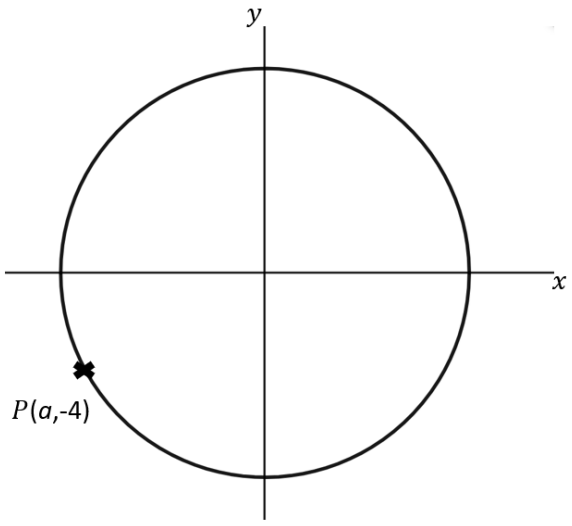
Q3. Line L has the equation $8x = 15 - 6y$ whilst line M has the the equation $3x + 4y = 13$.
Decide whether the lines L and M are perpendicular or not, explaining all your reasoning carefully.

(3 marks)

Q4. The sketch shows a circle which has equation $x^2 + y^2 = 80$ and a point P(a, -4) which lies on the circle.

(i) Find the value of a

(1 mark)



(ii) Find the equation of the tangent to the circle at P, giving your answer in the form $ax + by = c$ where a, b and c are whole numbers.

(4 marks)