1 A curve C has equation,

$$y^2 = \frac{3x^2}{3x - \frac{3}{2}}, \qquad x \in \mathbb{R}, \qquad x > \frac{1}{2}$$

1(a) Show that there are two tangents to C, which pass through the point $\left(\frac{1}{2}, \sqrt{2}\right)$

[11 marks]

1(b) Find the equations of these tangents, in the form $ax + by + c = 0$, where a, b and c are exact constants to be determined.

[5 marks]