

- 5** The equation of a curve is  $y = 4x^2 - kx + \frac{1}{2}k^2$  and the equation of a line is  $y = x - a$ , where  $k$  and  $a$  are constants.
- (a)** Given that the curve and the line intersect at the points with  $x$ -coordinates 0 and  $\frac{3}{4}$ , find the values of  $k$  and  $a$ . [4]

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