

**4** A curve has equation  $y = \frac{12}{3 - 2x}$ .

**(i)** Find  $\frac{dy}{dx}$ . [2]

A point moves along this curve. As the point passes through  $A$ , the  $x$ -coordinate is increasing at a rate of 0.15 units per second and the  $y$ -coordinate is increasing at a rate of 0.4 units per second.

**(ii)** Find the possible  $x$ -coordinates of  $A$ . [4]