

Question	Answer	Mark	Mark scheme	Additional guidance
17	$x = \frac{1}{3}, y = \frac{2}{3}$ $x = -\frac{1}{2}, y = \frac{3}{2}$	<p>P1</p> <p>P1</p> <p>P1</p> <p>P1</p>	<p>for start to process, eg <math>\frac{y}{x^2} = 6</math> oe or <math>y = 1 - x</math> or <math>x = 1 - y</math></p> <p>for process to substitute a rearranged equation into a correct equation to form an equation in one variable eg <math>\frac{1-x}{x^2} = 6</math> oe or <math>\frac{y}{(1-y)^2} = 6</math> oe</p> <p>for process to remove all fractions and expand all brackets to form a correct standard simplified three term quadratic in any form of <math>ax^2 + bx + c (= 0)</math> or <math>ay^2 + by + c (= 0)</math> eg <math>6x^2 + x - 1 (= 0)</math> or <math>6y^2 - 13y + 6 (= 0)</math></p> <p><b>(indep)</b> for process to solve equation <b>their</b> 3 term quadratic using any correct method eg <math>(3x - 1)(2x + 1) (= 0)</math> or <math>x = \frac{-1 \pm \sqrt{1^2 - 4 \times 6 \times -1}}{2 \times 6}</math> or eg <math>(2y - 3)(3y - 2) (= 0)</math> or <math>y = \frac{- -13 \pm \sqrt{(-13)^2 - 4 \times 6 \times 6}}{2 \times 6}</math></p>	<p>Allow <math>x = y - 1</math> for <math>x = 1 - y</math></p> <p>Look out for signs reversed The quadratic does not have to equal 0, ie accept <math>6x^2 + x = 1</math></p> <p>Can be implied by both correct <math>x</math> values <b>or</b> both correct <math>y</math> values (condone incorrect labelling) if the quadratic is correct If quadratic is incorrect then working must be shown. If using the quadratic formula condone one sign error, omission of brackets around the <math>b</math> in the <math>b^2 - 4ac</math> and the fraction line not being under the <math>-</math> in the <math>-b</math>. Allow some simplification – as far as eg <math>\frac{-1 \pm \sqrt{1 + 24}}{12}</math> or <math>\frac{13 \pm \sqrt{169 - 144}}{12}</math> <b>or</b> if factorising allow brackets which expand to give 2 out of 3 terms correct for their quadratic</p>

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17 cont.		A1	for $x = \frac{1}{3}$ $y = \frac{2}{3}$ and $x = -\frac{1}{2}$ $y = \frac{3}{2}$	<p>May be expressed in exact decimal form or as equivalent fractions</p> <p>Accept as coordinates</p> <p>Assume correct pairing unless clearly incorrect eg <math>\left(\frac{1}{3}, \frac{3}{2}\right)</math> <math>\left(-\frac{1}{2}, \frac{2}{3}\right)</math></p>