Quadratics - 2022 AS Nov

Solve the equation $3x + 2 = \frac{2}{x - 1}$.	[3]
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C	

A curve has equation $y = ax^{\frac{1}{2}} - 2x$, where $x > 0$ and a is a constant. The curve has a stationary point at the point P , which has x -coordinate 9.
Find the y-coordinate of P . [5]
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2. Nov/2022/Paper_9709_12/No.3

3.	Nov	/2022	/Paper_	9709	12	/No.6
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(a) Show that the equation

$$\frac{1}{\sin\theta + \cos\theta} + \frac{1}{\sin\theta - \cos\theta} = 1$$

may be expressed in the form $a \sin^2 \theta + b \sin \theta + c = 0$, where a, b and c are constants to be found.

Hence solve the equation $\frac{1}{\sin \theta}$	$+\cos\theta$ + $\sin\theta$	$\frac{1}{\theta - \cos \theta} = 1$	for $0^{\circ} \leqslant \theta \leqslant 360^{\circ}$	·.
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