Question		Working	Answer	Mark	Notes	
24		$\frac{x-4}{x} \times \frac{x-5}{x-1} = 0.7$ $3x^2 - 83x + 200 (= 0)$ oe $\frac{83 \pm \sqrt{83^2-(4\times3\times200)}}{2\times3}$ or $(3x - 8)(x - 25) (=0)$ or $(x - 83/6)^2 + 200/3 - 83^2/36 (=0)$ Alt: y = yellow marbles	25	5	M2 A1 M1 A1 M2	If not M2 then M1 for either $\frac{x-4}{x}$ or $\frac{x-5}{x-1}$ Rearrangement of their quadratic to the form $ax^2 + bx + c (= 0)$ 1st step in solving the correct 3 term quadratic Accept 25 only (dep on M3 if using algebra) If not M2 then M1 for either $\frac{y}{y+4}$ or $\frac{y-1}{y+3}$ Rearrangement of their quadratic to the form $ay^2 + by + c (= 0)$
		$\frac{y}{y+4} \times \frac{y-1}{y+3} = 0.7$ $3y^2 - 59y - 84 (= 0)$ oe $\frac{59 \pm \sqrt{59^2-(4\times3\times-84)}}{2\times3}$ or $(3y + 4)(y - 21)$ or $(y - 59/6)^2 - 84/3 - 59^2/36 (=0)$ $y = 21$ 21+4	25		A1 M1 A1	1st step in solving the correct 3 term quadratic Accept 25 only (dep on M3 if using algebra) Give full marks if $\frac{21}{25} \times \frac{20}{24} = 0.7$ seen and 1st M2 scored **NB: SC B1 for completing 1st step in solving incorrect 3 term quadratic**
						Total 5 marks

						Total for Paper: 100 marks

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