

7			<b>DR</b> $u^2 = 36x^4 + 12x^3 + x^2$ So $36x^4 + 12x^3 + 7x^2 + x - 2 = u^2 + 6x^2 + x - 2$  Eqn reduces to $u^2 + u - 2 = 0$ $u = -2$ or $1$  $6x^2 + x = -2$ has no roots because $\Delta = 1 - 48 < 0$  $6x^2 + x = 1$ has roots $x = \frac{1}{3}$ or $-\frac{1}{2}$	<b>M1</b>          <b>A1</b> <b>A1</b>  <b>B1</b>   <b>A1</b>	<b>3.1a</b>          <b>2.1</b> <b>1.1</b> <b>BC</b>  <b>3.2a</b>   <b>1.1</b> <b>BC</b> Ignore any answers from $u = -2$  SC If M1 gained but incorrect or inadequate method & correct answers: M1A0A0B0A1	M1 for attempt $(6x^2 + x)^2$ or attempt $\div$ LHS by $(6x^2 + x)$ , at least 2 terms correct or obtain any correct eqn in terms of $x$ and $u$          or $x = \frac{-1 \pm \sqrt{47}i}{12}$ given instead of "no roots" etc          Otherwise correct ans without any correct working: no marks. (Because <b>DR</b> )