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POLYNOMIALS

ASSIGNMENT NO. 6

1. Factoise: $12(x^2+7)^2-8(x^2+7)(2x-1)-15(2x-1)^2$
2. If (-1) is a zero of the polynomial $p(x)=ax^3-x^2+x+4$, find the value of a.
3. If $(3x-2)$ is a factor of $3x^3+x^2-20x+12$, find the other factors.
4. If $x=2$ and $x=0$ are the zeroes of the polynomial $f(x)=2x^3-5x^2+ax+b$, find the values of a and b.
5. Factorise: $x^3-6x^2+11x-6$
6. Without actual division, prove that $x^4+2x^3-2x^2+2x-3$ is exactly divisible by x^2+2x-3
7. Find the value of p if $(x-p)$ is a factor of $x^5-p^2x^3+2x+p+3$. Hence factorise $x^2+4px+3$.
8. Evaluate the following: $\left(\frac{3}{2}x+1\right)^3-\frac{27x^2}{4}-\frac{9x}{2}$