Polynomial Equations Quiz /10

1. Solve $3x^{3}-2x^{2}-7x-2=0$ by factoring. Show the fully factored equation. 3 marks
2. What is the remainder when $5x^{23}-3x^{12}+2$ is divided by $x+1$. 1 mark
3. Divide $2x^{4}+3x^{3}-8x^{2}+x-5$ by $x^{2}-3x+1$. Write the answer in the form:

Dividend = (Divisor)(Quotient) + Remainder 3 marks

1. An open top rectangular box is constructed by cutting a square of length *x* cm from each corner of a 20 cm by 24 cm rectangle, and then folding up the sides. What size square must be cut to have a volume of 756 cubic cm? 3 marks