

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Perform the subtraction and simplify:

$$\frac{x}{3x^2 - 27} - \frac{1}{6x + 18} =$$

2. Compute the quotient and the remainder using **synthetic division**: $(5x^3 - 7x + 1) \div (x - 2)$.

3. Compute the quotient and the remainder using **long division**: $(5x^3 - 7x + 1) \div (x - 2)$.