NAME _____

Remainder Theorem

Determine the remainder when the polynomial $f(x) = x^{10} + 4x^9 - 21x^8$ is divided by each of the following factors.
Remember to show your work!

1. $x - 4$ **Remainder**: _____   **Is it a factor?** YES   or   NO

2. $x + 7$ **Remainder**: _____   **Is it a factor?** YES   or   NO

3. $x + 2$ **Remainder**: _____   **Is it a factor?** YES   or   NO

4. $x - 1$ **Remainder**: _____   **Is it a factor?** YES   or   NO

5. $x - 3$ **Remainder**: _____   **Is it a factor?** YES   or   NO