

**Lesson #11 A-2: Understanding Polynomials and Dividing Polynomials Using Synthetic Division  
(Reference: Lesson #51 in book)****Problem**

1. Divide each of the following polynomials using Synthetic Division Method and write your final answer in standard form.

1.  $(3x^3 - 2x^2 - 7x + 6) \div (x + 1)$

2.  $(2x^3 + 7x^2 - 6x - 8) \div (x + 4)$

3.  $(9x^3 - 73x^2 + 71x - 10) \div (x - 7)$

4. 
$$\frac{(x^4 + 5x^3 + 3x + 12)}{x + 5}$$

5. 
$$\frac{(2x^3 - 5x - 7)}{x - 2}$$

6. 
$$\frac{(6x^3 - 37x^2 + 175)}{x - 5}$$

7.  $(5x^4 - 3x^3 - 8) \div (x + 1)$

8.  $(x^3 + 5) \div (x + 2)$

9. 
$$\frac{(3x^3 + 6x^2 - 18x + 9)}{3x - 3}$$

10. 
$$\frac{(2x^3 - 11x^2 + 23x - 20)}{2x - 5}$$