Synthetic Division Assignment Name: _____

Divide using synthetic division.

1) $(3x^2 - 8x + 4) \div (x - 2)$

2) $(5x^2 - 4x - 12) \div (x - 2)$

3) $\frac{x^4+6x^3+6x^2}{x+5}$

4) $\frac{2x^2+13x-8}{2x-1}$

5) $(6x^3 - 14x^2 + 10x - 4) \div (x - 1)$

6) $(x^4 - 16x^2 + 63) \div (x + 3)$

7) $\frac{x^4-3x^3-28x+6}{x-6}$

8) $\frac{3k^3+7k^2+4}{3k+1}$

Use Synthetic Division to evaluate if the linear binomial is a factor of the polynomial.

9) $(x+2);\ \ x^3-3x+2$

10) $(x+5);\ \ 3x^2+10x-4$

11) $(x+1);\ \ 4x^3-5x^2+3$

12) $(x-3);\ \ x^3+8x^2-31x-6$

13) $(2h-3);\ \ 2h^2-h-3$

14) $(2r+1);\ \ 64r^3-8$

Use synthetic division to determine the value of each function for the indicated value.

15) $f(3);\ \ x^4+5x^3+5x^2-5x-6$

16) $f(7);\ \ 2x^4-5x^3-x^2+3x+2$