Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Synthetic Division Review

Use Synthetic division to divide the polynomials. Factor each answer completely. Find all zeros.

1) $\left(3x^{3}-4x^{2}-17x+6\right)÷\left(3x-1\right)$ (2) $\left(6x^{3}+5x^{2}-3x-2\right)÷\left(2x+1\right)$

3) $\left(x^{3}+9x^{2}+23x+15\right)÷\left(x+5\right)$ (4) $\left(6x^{3}+7x^{2}-1\right)÷\left(2x+1\right)$

5) $\left(n^{3}+16n^{2}+71n+56\right)÷\left(n+8\right)$ (6) $\left(25x^{3}-40x^{2}+17x-2\right)÷\left(5x-2\right)$

7) $\left(5x^{3}-18x^{2}-33x-10\right)÷\left(x-5\right)$ (8) $\left(15x^{3}-28x^{2}+15x-2\right)÷\left(3x-2\right)$

9) $\left(9x^{3}+3x^{2}-5x+1\right)÷\left(3x-1\right)$ 10) $\left(10a^{4}+60a^{3}+10a+60\right)÷\left(a+6\right)$