Name_____

2.2 – POLYNOMIAL DIVISION

Use Polynomial Long Division to find the quotient and remainder when $f(x)$ is divided by $d(x)$.

1. $f(x)=6x^3-20x^2+11x-5;\ d(x)=x-3$

2. $f(x)=3x^2+20x+21;\ d(x)=x+3$

3. $f(x)=30x^4+20x^3+26x^2+30x-6;\ d(x)=6x-2$

4. $f(x)=3x^4-14x^3-4x^2-6x-9;\ d(x)=x^2-4x-5$

Use Synthetic Division to find the quotient and remainder when $f(x)$ is divided by $d(x)$.

5. $f(x)=4x^2+23x+29;\ d(x)=x+4$

6. $f(x)=5x^2+22x+12;\ d(x)=x+2$

7. $f(x)=6x^3+20x^2+19x+10;\ d(x)=x+2$

8. $f(x)=x^2+3x+2;\ d(x)=x-2$

Use the Remainder Theorem to evaluate $f(c)$.

9. $f(x)=6x^3-4x^2-16x;\ c=-1$

10. $f(x)=x^3-8x^2-7x+14;\ c=2$

11. $f(x)=x^4-x-5;\ c=-1$

12. $f(x)=x^5-3x^4-4x^3-4x^2-x;\ c=-1$