Algebra II A
6.4 Worksheet – Long Division **Name**_____

Divide the following.

1. $7\overline{)1258}$

2. $43\overline{)6943}$

3. $31\overline{)7559}$

Use long division to divide the following polynomials.

4. $h-4\overline{)h^2-11h+28}$

5. $r+3\overline{)2r^2+5r-3}$

6. $g-3\overline{)8g^2-18g-9}$

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

8. $2y+3\overline{)6y^2+7y-4}$

9. $3m+2\overline{)6m^3-5m^2-12m-4}$

Be careful on 10-12! You will need to add "placeholders" 0x, etc.

10. $p+1\overline{)p^3-p^2-p-1}$

11. $x+2\overline{)x^3+8}$

12. $y-1\overline{)y^3-1}$

Answer these questions to understand what it means to be a factor

13. Is 5 a factor of 20? Why or why not?

14. Is 7 a factor of 20? Why or why not?

15. Is $(x-4)$ a factor of $(x^2-4x+16)$? Why or why not?

16. Is $(x+1)$ a factor of (x^2-1)? Why or why not?