Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Advanced Algebra

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BM1 Review #2

**Circle your answer on each problem!**

**Divide the following** *(Synthetic or Long Division):*

$1) (-2x^{3}-3x+1)÷(x-4)$ $2) (6x^{4}+7x^{3}-6x^{2}-8x+11)÷(x-1)$

3) $(4x^{2}-5)÷(x+2)$ $4) (2x^{4}-8x^{3}+6x+x-3)÷(x-3)$

**Factor Each Expression:**

$5) 36x^{2}-49$ $ 6) 12x^{3}-8x^{2}-27x+18$

$7) 8x^{3}-8x^{2}-6x$ $8) x^{6}+8x^{4}-x^{2}-8$

$9) 5x^{2}-85x+360$ $10) 6x^{2}+7x-3$

$11) x^{3}+5x^{2}-4x-20$ $12) 3x^{2}-48$

$13) 3x^{3}-4x^{2}+30x-40$ $14) -2x^{4}-10x^{2}+12 $

$15) 40x^{6}-10y^{12}$ $16) 6x^{4}-x^{3}-5x^{2}$

$17) 2x^{3}-2x^{2}+50x-50$ $18) x^{8}+23x^{4}-50$