MATD 0370 - Elementary Algebra - Summer Name Written Homework 5 - Show all work to receive credit.

## Subtracting Polynomials (Section 4.4)

1) Subtract and simplify. $\left(-2 x^{3}-3 x^{2}+4 x+2\right)-\left(-x^{3}+6 x^{2}-7 x-11\right)$

## Multiplying Polynomials (Sections 4.4, 4.5, 4.6)

Multiply and simplify. Show your steps.
2) $(5 x-6)(2 x+8)$
3) $(3 y-4)^{2}$
4) $(2 m+7 y)(2 m-7 y)$
5) $\left(5 x^{2}-x y-y^{2}\right)(2 x+3 y)$

## Factoring (Sections 5.1 and 5.2)

Remember to always look first for a common factor and write in descending order.
6) Factor by grouping: $10 x^{3}+8 x^{2}-5 x-4$
7) Factor completely: $m^{2}-5 m-14$
8) Factor completely: $7 x-60+x^{2}$
9) Factor completely: $3 y^{2}-9 y-84$

