

- i. Show all relevant work. No work, no credit.
- ii. Write your answers in the spaces provided on the right.
- iii. Staple when you turn in the assignment.
- iv. Due Wednesday, September 10 at the beginning of the class.

**Factor completely. If the polynomial is prime, state this.**

1)  $5(x^2+4)^4(2x)(x-2)^4+(x^2+4)^5(4)(x-2)^3$

1) \_\_\_\_\_

2)  $\frac{1}{2}x^{-1/2}(3x+4)^{1/2} - \frac{3}{2}x^{1/2}(3x+4)^{-1/2}$

2) \_\_\_\_\_

$$3) \frac{3(x+2)^2(x-3)^2 - (x+2)^3(2)(x-3)}{(x-3)^4}$$

3) \_\_\_\_\_

$$4) \frac{2(1+x)^{1/2} - x^2(1+x)^{-1/2}}{x+1}$$

4) \_\_\_\_\_

$$5) \frac{(1-x^2)^{1/2} + x^2(1-x^2)^{-1/2}}{1-x^2}$$

5) \_\_\_\_\_