Math-08 Homework #4

<u>Reading</u>

- Text book section 0.5, 0.6, and 0.7

<u>Problems</u>

1). Expand the following. Your answer should contain *no* radicals.

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

2). Explain why the following is incorrect, and then state what it should be:

$$(2x + 3y)^2 = 4x^2 + 9y^2$$

3). Factor the following. Your answer should contain *no* negative exponents:

$$x^{\frac{5}{3}} - 2x^{\frac{2}{3}} + x^{-\frac{1}{3}}$$

4). Consider:

$$\frac{x+1}{x+2}\left(\frac{1}{x} + \frac{2}{x+1} - \frac{x-5}{x-2}\right)$$

    a). Combine into a single, simplified rational expression.

    b). State the domain.