

and

$$2 - 1 = 1$$

so the two sides agree as they should.

4.3 Problems (6 pt Problems)

1. Divide $3x^2y^3 - 15xy^2 + 3xy$ by $3xy$ (check for errors by evaluation of appropriate expressions).
2. Divide $2x^4 - x^3 - 2x^2 + 5x - 2$ by $2x + 1$ (check for errors by evaluation of appropriate expressions).
3. Determine whether 5 is a zero of the polynomial

$$x^5 - 5x^4 - 2x^3 + 4x^2 + 29x + 4$$

by dividing by $x - 5$ and drawing appropriate conclusions.

4.4 Exercises

1. Divide $21x^5y^3$ by $7x^3y$ (check for errors by evaluation of appropriate expressions).
2. Divide $(x-2)(2x-3)$ by $x-2$ (check for errors by evaluation of appropriate expressions).
3. Divide $5x^2 - 7x - 3$ by $3x + 1$ (check for errors by evaluation of appropriate expressions).
4. Divide $-2x^3 + 3x^2 + x - 1$ by $-2x + 1$ (check for errors by evaluation of appropriate expressions).