These are relatively easy problems. They are just more problems where you will combine like terms.

Polynomials are expressions that have terms of the form $a x^n$ where $a$ is a number and $x$ is raised to positive, integer powers, including 0.

$$2x + \frac{1}{3}x - 4 \quad \chi^2 - 2\chi + 1$$

ARE POLYNOMIALS

$4\chi^\frac{1}{2}$ is not (fractional exponent)

$4\chi^{-1}$ is not (negative exponent)

$4 + \frac{1}{\chi}$ is not (negative exponent)

Polynomials are usually written with decreasing powers of $x$. This is convention, but it is not required.

$$2x^4 + 4x^2 - 6\chi + 3$$

Notice that there is no $x^3$ term. This is OK. 3 is actually $3x^0$, but we don’t write $x^0$ because it equals 1.

The above polynomial has 4 terms (terms are things separated by +’s and −’s).

One term (like $x^2$) can be called a monomial

two terms (like $x^2 - 1$) can be called a binomial

three terms (like $x^2 - 2\chi + 3$) can be called a trinomial

four terms and more are called polynomials
The degree of a term is the sum of all its exponents.

$5a^4b^7c^3$ is an 8th degree polynomial because $4 + 1 + 3 = 8$

The degree of a polynomial is the same as the degree of the terms that is largest.

$8x^3 + 2x^2 - 3x + 4$ is 3rd degree

$x^2y^4 + 2x + 3$ is 6th degree

p. 252 Add polynomials - use the same rules as for distributives or use the shortcuts for removing parentheses. Polynomials can be added on one line (the best way) or in columns (p. 253)

p. 254 Subtract polynomials - don't forget to change subtraction to addition and change all the signs in the second set of parentheses. Polynomials can be subtracted on one line (the best way) or in columns (p. 254)

The examples in the book are good.

When adding or subtracting in columns, terms that are missing (0$x^3$ for example) need to have space left for them. See Ex. 9 p. 255