Adding and Subtracting Polynomials

1. Determine whether the given expression is a monomial (Yes or No). For those that are monomials, state the coefficient and degree.
(similar to p.323 #30)

$$-5x^3$$

2. Determine whether the given expression is a monomial (Yes or No). For those that are monomials, state the coefficient and degree.
(similar to p.323 #32)

$$8m^{57}$$

3. Determine whether the given expression is a monomial (Yes or No). For those that are monomials, state the coefficient and degree.
(similar to p.323 #34)

$$\frac{2}{x^3}$$

4. Determine whether the given expression is a monomial (Yes or No). For those that are monomials, state the coefficient and degree.
(similar to p.323 #38)

$$x^{-2}$$

5. Determine whether the given expression is a monomial (Yes or No). For those that are monomials, state the coefficient and degree.
(similar to p.323 #40)

$$\frac{1}{7}$$

6. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #42)

$$7x - 2$$

7. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #44)

$$\frac{5}{x}$$

8. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #46)

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

9. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #50)

$$3x^5 + 2x - 7$$

10. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #52)

$$7x^{-2} + 3x - 7$$

11. Determine whether the given expression is a polynomial (Yes or No). If it is a polynomial, write the polynomial in standard form, determine its degree, and state if it is a monomial, binomial, or trinomial. If it is a polynomial with more than 3 terms, identify the expression as a polynomial
(similar to p.323 #54)

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

12. Add the polynomials, express your answer in standard form
(similar to p.323 #60)

$$(3x^2 + 4) + (7x^2 - 5x - 2)$$

13. Add the polynomials, express your answer in standard form
(similar to p.323 #66)

$$\left(\frac{5}{4}x^2 - \frac{1}{2}x + 2\right) + \left(\frac{1}{6}x^2 + \frac{5}{3}x - 7\right)$$

14. Subtract the polynomials, express your answer in standard form
(similar to p.323 #74)

$$\left(9x^2 - 2x - 5\right) - \left(x^2 - 7x + 3\right)$$

15. Simplify each of the following
(similar to p.323 #88)

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