

1. How do you determine the number of terms a polynomial has?
2. How do you determine the degree of a polynomial?
3. Write a trinomial with a degree of 5.
4. State whether the following are polynomials in one variable. If they are not, explain why.

a. $3x^3 - x^{\frac{1}{2}} + 17$

b. $7 - x$

c. $a^2 + 2ab + b^2$

d. $6x^4 + 3x^3 - 4x + 3$

e. $c^2 + c + \frac{1}{c}$

Simplify the following.

Then put the resulting polynomial in descending order, state its degree and leading coefficient, and classify the polynomial by the number of terms.

5. $(3x^2 - x + 2) + (x^2 + 4x - 9)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____
6. $(16 + 9r^2 + 6r) - (-7r + 8r^2 - 10)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____
7. $(x + 4x^3 + 5 + 3x^2) + (7 - 4x + 3x^3)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____
8. $(5y^4 - 2 - 6y) - (6y^4 + -4y^2 + 3y^3)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____
9. $(2x + 4 + 3x^2)(x - 6)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____
10. $(2x^2 + 3x - 7)(3x^2 - 4x - 5)$	Circle one of the following: Monomial Binomial Trinomial Polynomial Degree: _____ Leading Coefficient: _____