**Barron’s Let’s Review Regents – Algebra II**

# Chapter 1: Polynomial Expressions and Equations

## Polynomial Arithmetic

**Multiplying a Polynomial by a Constant**

**Adding Polynomials**

1. Combine the two terms.
2. Combine the two terms.
3. Combine the two constant terms.

**Subtracting Polynomials**

The minus sign can be thought of as multiplying by a negative one. Distribute the multiplication through the second polynomial.

**Multiplying Polynomials**

**FOIL**

1. **F**irst terms in each expression.
2. **O**uter terms in each expression.
3. **I**nner terms in each expression.
4. **L**ast terms in each expression.

**Multiplication Patterns**

**Perfect Squares**

The coefficient of the -term will be twice the constant term.

**Difference of Perfect Squares**

**Dividing Polynomials**

Answer:

### Check Your Understanding of Section 1.1

1. Multiple-Choice
2. What is   
   **(1)**
3. What is ?  
   **(2)**
4. What is ?  
   **(4)**
5. What is ?  
   **(1)**
6. What is ?  
   **(4)**
7. What is ?  
   **(4)**
8. What is ?  
   **(1)**
9. What is ?  
   **(2)**
10. What is ?  
    **(1)**
11. What is ?  
    **(4)**
12. What is ?  
    **(3)**
13. *Show how you arrived at your answers*.
14. Simplify .
15. Zahra calculated   
     as  
     and got   
     What mistake did Zahra make?  
      
    **Zahra made the mistake of not distributing the minus sign in the second expression.**  
    **It should have been:**
16. If , what is the value of *a*?  
      
    **)** (  
     (ck)
17. If , what is the value of *a*?
18. Simplify .