Unit 2 Lesson 4: Combining Polynomials

1 Notice and Wonder: What Can Happen to Integers (Warm up)

Student Task Statement

What do you notice? What do you wonder?

- $7 \cdot 9 = 63$

- $7 + 9 = 16$

- $7 - 9 =$ -2

- $\frac{7}{9} = 0.777 \ldots$

2 Experimenting with Integers

Student Task Statement

Which of these statements are true? Give reasons in support of your answer.

1. If you add two even numbers, you'll always get an even number.

2. If you subtract an even number from another even number, you'll always get an even number.

3. If you add two odd numbers, you'll always get an odd number.

4. If you subtract an odd number from another odd number, you'll always get an odd number.

5. If you multiply two even numbers, you'll always get an even number.

6. If you multiply two odd numbers, you'll always get an odd number.

7. If you multiply two integers, you'll always get an integer.

8. If you add two integers, you'll always get an integer.

9. If you subtract one integer from another, you'll always get an integer.

3 Experimenting with Polynomials

Student Task Statement

Here are some questions about polynomials. You and a partner will work on one of these questions.

1. If you add or subtract two polynomials, will you always get a polynomial?

2. If you multiply two polynomials, will you always get a polynomial?

- Try combining some polynomials to answer your question. Use the ones given by your teacher or make up your own polynomials. Keep a record of what polynomials you tried, and the results.

- When you think you have an answer to your question, explain your reasoning using equations, graphs, visuals, calculations, words, or in any way that will help others understand your reasons.