Special Products Worksheet

Name: Date:

**Directions:** Multiply the given polynomials on your own paper. Be sure to write the products on the table in the table on this worksheet once you find them!

|  |  |
| --- | --- |
| **Problem** | **Simplified Answer** |
| (x + 1)(x – 1) |  |
| (2x + 3)(2x – 3) |  |
| (x + 11)(x – 11) |  |
| (x + y)(x – y) |  |
| (x + 1)2 |  |
| (5x + 3)2 |  |
| (x + 9)2 |  |
| (x + y)2 |  |
| (x – 1)2 |  |
| (x – 3)2 |  |
| (2x – 1)2 |  |
| (x – y)2 |  |
| (x + 1)3 |  |
| (x + 2)3 |  |
| (2x – 3)3 |  |
| (x + y)3 |  |

1. What patterns do you notice in the problems given?

2. What patterns do you notice in the answers to the problems given?

3. What are special products?

4. What types of special products could we have used to do the problems given in the table?

5. Multiply the following polynomials without using the distributive property? (Use the special products rules!)

a. (x + 10)2  b. (2x + 7)(2x – 7)

c. (2x – 4)2 d. (x + 4)3