

Difference of Two Squares and Perfect Squares

1. Using the [Digital Manipulatives](#), build the given polynomials.

If you have the Integer Block Kit and algebra inserts, you can also use these to complete this activity.

2. Determine if each expression is a difference of two squares or a perfect square trinomial.
3. Write the factored answer.

- A. $x^2 - 9$
B. $x^2 - 4x + 4$
C. $4x^2 + 4x + 1$
D. $x^2 - 16$
E. $x^2 - 10x + 25$

The diagrams are arranged in a grid. Each diagram shows a large red square representing x^2 . Other blocks represent the remaining terms of the polynomial.

- Diagram A:** A large red square with a blue vertical strip on the left and a grey horizontal strip at the bottom. Labeled: **A. Difference of two squares** $(x - 3)(x + 3)$
- Diagram B:** A large red square with a blue vertical strip on the left and a grey horizontal strip at the bottom. Labeled: **B. Perfect square trinomial** $(x - 2)(x - 2)$
- Diagram C:** A large red square divided into four quadrants by a blue vertical strip and a blue horizontal strip. Labeled: **C. Perfect square trinomial** $(2x + 1)(2x + 1)$
- Diagram D:** A large red square with a blue vertical strip on the left, a blue horizontal strip at the bottom, and a yellow 2x2 grid of small squares in the bottom-left corner. Labeled: **D. Difference of two squares** $(x - 4)(x + 4)$
- Diagram E:** A large red square with a blue vertical strip on the left, a grey horizontal strip at the bottom, and a blue 2x2 grid of small squares in the bottom-left corner. Labeled: **E. Perfect square trinomial** $(x - 5)(x - 5)$