

Name: _____

Date: _____

BLM 7.3.1

Practice: Factor a Difference of Squares

- Find the positive square root of each number.
 - 64
 - 169
 - 121
 - 144
- Write each number as a power of its positive square root.
 - 4
 - 9
 - 225
 - 10 000
- Which expressions are differences of squares.
 - $x^2 + 9$
 - $25 - 9x^2$
 - $x^2 - 81$
 - $x^2 + 64$
- Factor each difference of squares.
 - $x^2 - 25$
 - $64 - 4x^2$
 - $9x^2 - 81$
 - $9x^2 - 49$
- The total area of the driveway is $4x^2$. Jordan shovelled a portion of the driveway that is 3 m by 3 m. He left the rest of the driveway for his brother to shovel.
 - Write an expression to represent the area left for his brother to shovel.
 - Factor the expression from part a) to find expressions for the dimensions of a rectangle with an equal area to the remaining area of the driveway.
 - Find the actual dimensions of the rectangle if $x = 3$ m.
- The area of a chalkboard is represented by $x^2 - 144$.
 - What are the dimensions of chalkboard?
 - Find the actual dimensions if $x = 100$ cm.
- The area of a desk's rectangular surface is represented by $x^2 - 16$.
 - What are the dimensions of the desk's surface?
 - Find the actual dimensions if $x = 80$ cm.
- Jim wants to put some furniture in his bedroom. The floor area of his bedroom is x^2 . He wants to put in a bed that has surface area 4 m^2 . Write a quadratic expression that represents the floor area of the bedroom that is left for other furniture.
- Silva wants to use an area of her backyard for a garden. The area of the backyard is $9x^2$. She wants her garden to be 16 m^2 .
 - Write a quadratic expression that represents the remaining area of the backyard.
 - What are the dimensions of a rectangle with the same area as the remaining area of the backyard?
 - What are the actual dimensions if $x = 3$ m?
- The total area of the living room floor is $16x^2$. Michelle wants an area of the room marked off for a new sofa that requires 4 m^2 .
 - Write the binomial to represent the area left in the living room after the sofa area is marked off.
 - Factor the binomial to find expressions for the dimensions of a rectangle with an equal area to the remaining area of the room.