## Factorization When a Binomial is the Difference of Two Squares

## A. Choose the Correct Answer:

1.	The factorized form of a <sup>2</sup> – b <sup>2</sup> is:		
	a) (a – b)²	b) (a + b) (a – b)	
	c) (a + b)²	d) (a – b) (a – b)	
2.	Which of the following is a difference of two squares?		
	a) a² + b²	b) (a + b)²	
	c) x <sup>2</sup> - 9	d) x <sup>2</sup> + 9	
3.	3. The factorized form of $x^2 - 25$ is:		
	a) (x + 5) (x – 5)	b) (x + 25) (x – 1)	
	c) (x + 5) <sup>2</sup>	d) (x – 5) <sup>2</sup>	
4.	. Which expression is not a difference of two squares?		
	a) $p^2 - q^2$	b) a² – b²	
	c) $x^2 + 2x + 1$	d) 9x <sup>2</sup> – 16y <sup>2</sup>	
5.	5. The factorization of 4a <sup>2</sup> – 9b <sup>2</sup> is:		
	a) (2a + 3b) (2a – 3b)	b) (2a – 3b)²	
	c) (2a + 3b)²	d) (2a – b) (2a + b)	

**B. Write the Missing Terms to Complete the Sentences:** 

1. 
$$a^2 - b^2 = () \times ()$$

- 2. The difference of squares formula can be used only when two terms are \_\_\_\_\_\_ and \_\_\_\_\_\_
- 3. The factorized form of x<sup>2</sup> 16 is \_\_\_\_\_
- 4.  $9m^2 4n^2 = () ()$
- 5. Factorization of the difference of squares results in the \_\_\_\_\_\_ of two binomials

## C. Figure out the answers to these questions:

- 1. Factorize  $36p^2 49q^2$
- 2. Factorize  $81x^2 1$
- 3. Factorize a<sup>2</sup> 16b<sup>2</sup>

- 4. Factorize  $49m^2 64n^2$
- 5. Factorize  $25x^2 9y^2$
- D. Mark each sentence with a True ( $\checkmark$ ) or False (X):
  - 1.  $a^2 b^2 = (a + b) (a b)$ .
  - 2. The expression  $x^2 + 9$  can be factorized using the difference of squares.
  - 3.  $16x^2 9y^2 = (4x + 3y)(4x 3y)$ .
  - 4. Every binomial is a difference of two squares.
  - 5. In a difference of squares, both terms must be perfect squares.

## E. Challenge yourself with these questions:

- 1. Factorize  $100p^2 36q^2$ .
- 2. Factorize  $64x^2 1$ .
- 3. Factorize  $m^2 49n^2$ .
- 4. Factorize  $121x^2 81y^2$ .
- 5. Factorize 144p<sup>2</sup> 25q<sup>2</sup>.