# Subtraction of algebraic expressions

#### A. Choose the correct answer:

- 1. What is the result of subtracting (2x + 3) from (5x + 6)?
  - a) 3x + 3 b) 7x + 9
  - c) 3x 3 d) -3x 3
- 2. Subtracting (4a 5b) from (2a + 3b) gives
  - a) 6a 2b b) –2a + 8b
  - c) –2a + 8b d) 2a + 8b
- 3. When subtracting algebraic expressions, we
  - a) change the sign of all terms in the second expression
  - b) only subtract constants
  - c) add coefficients only
  - d) ignore variable powers
- 4. Subtract:  $(3x^2 + 2x 1) (x^2 4x + 5)$ 
  - a)  $2x^2 + 6x 6$  b)  $4x^2 2x 4$
  - c)  $2x^2 + 6x + 4$  d)  $4x^2 + 6x 6$
- 5. The correct subtraction of 5xy 3x from 2xy + 6x is
  - a) 3xy 9xb) -3xy + 9xc) -3xy - 9xd) 7xy + 3x

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

- 1. Subtraction of algebraic expressions is done by changing the sign of the \_\_\_\_\_\_ expression.
- 2. (4x 2) (3x + 5) =\_\_\_\_\_.
- 3. To subtract expressions, arrange them in \_\_\_\_\_ order.
- 4. Subtracting a term is the same as \_\_\_\_\_ its negative.
- 5. (7a + 4b 2) (2a b + 3) = \_\_\_\_\_.

## C. Mark each sentence with a True ( $\checkmark$ ) or False (X):

- 1. Subtracting an expression means reversing the signs of all its terms before adding.\_\_\_\_\_
- 2. (2x + 3y) (x + y) = x + 2y.
- 3. Subtracting a monomial from a binomial always gives a binomial.
- 4. While subtracting, like terms are combined by adding their coefficients.
- 5. The subtraction of two expressions cannot be done using vertical method.

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

- 1. Subtract the expression:  $2a^2 + 5a 3$  from  $4a^2 a + 2$ .
- 2. Write two trinomials and show step-by-step subtraction.
- 3. From 6x 3y + 8, subtract the expression -4x + 2y 1.
- 4. Simplify:  $(5m^2 2mn + 3n^2) (2m^2 + mn 4n^2)$ .
- 5. Rearrange and subtract: (3x + 2y 5) and (x y + 7).

## E. Challenge yourself with these questions:

- 1. Create and subtract two algebraic expressions using three different variables.
- 2. From the expression  $3p^2 + 2pq q^2$ , subtract  $p^2 4pq + 5q^2$ .
- 3. Subtract  $\frac{4x}{5} \frac{y}{3}$  from x y and simplify.
- 4. Take any algebraic expression and subtract it from itself.
- 5. Make a subtraction problem using binomials and solve step-by-step.