

# FUNDAMENTAL OPERATIONS

**SUBJECT : MATHEMATICS**

**CHAPTER NUMBER:19**

**CHAPTER NAME :FUNDAMENTALCONCEPTS AND  
OPERATIONS**

**SUBTOPIC : RECAPITULATION OF CHAPTERS**

**PERIOD NO: 7**

**CHANGING YOUR TOMORROW**

# Learning outcomes

- Students will be able to identify like and unlike terms.
- Students will be able to add and subtract like and unlike terms.
- Students will be able to divide monomial by monomial .
- Students will be able to binomial by monomial.
- Students will be able to divide polynomial by polynomial.
- Students will be able to write a given statement in algebraic form.
- Students will be able to write a given algebraic form in suitable statement.
- Students will be able to define constants and variables.
- Students will be able to identify terms, like and unlike terms.
- Students will be able to define different types of algebraic expressions.
- Students will be able to find product of factors.
- Students will develop application skill.

# FUNDAMENTAL CONCEPTS AND OPERATIONS

1. Write the coefficient of:

(i)  $x$  in  $-3xy^2$

(ii)  $x$  in  $-ax$

(iii)  $y$  in  $-y$

(iv)  $y$  in  $(2/a)y$

2. One pencil costs Rs 2 and one fountain pen costs Rs 15. What is the cost of  $x$  pencils and  $y$  fountain pens?

3. Think of a number. Multiply by 5. Add 6 to the result. Subtract  $y$  from this result. What is the result?

# FUNDAMENTAL CONCEPTS AND OPERATIONS

## 4. Subtract:

(i)  $5a - 3b + 2c$  from  $a - 4b - 2c$

(ii)  $4x - 6y + 3z$  from  $12x + 7y - 21z$

(iii)  $5 - a - 4b + 4c$  from  $5a - 7b + 2c$

(iv)  $-8x - 12y + 17z$  from  $x - y - z$

# FUNDAMENTAL CONCEPTS AND OPERATIONS

## 1. Add:

(i)  $8xy$  and  $3xy$

(ii)  $2xyz$ ,  $xyz$  and  $6xyz$

(iii)  $2a$ ,  $3a$  and  $4b$

(iv)  $3x$  and  $2y$

## 2. Simplify:

(i)  $2x^5 \div x^2$                       (ii)  $6a^8 \div 3a^3$

(iii)  $20xy \div -5xy$                       (iv)  $-24a^2b^2c^2 \div 6ab$

# Additional Homework

1. Binny spend Rs  $a$  daily and saves Rs  $b$  per week. What is her income for two weeks?
2. Evaluate:
  - (i)  $(a + b)(a - b)$ .
  - (ii)  $(a^2 + b^2)(a + b)(a - b)$ , using the result of (i).
  - (iii)  $(a^4 + b^4)(a^2 + b^2)(a + b)(a - b)$ , using the result of (ii).

**THANKING YOU**  
**ODM EDUCATIONAL GROUP**