

The background features a dark blue gradient with a subtle pattern of white stars. On the left side, there are several overlapping circular diagrams. One prominent diagram is a large circle with a scale from 140 to 260 in increments of 10. Other smaller circles contain curved lines and arrows, suggesting mathematical or geometric concepts. The overall aesthetic is clean and technical.

# FACTORING PART TWO

DIRECTED LEARNING ACTIVITY

# FACTORING TRINOMIALS ( $a = 1.$ )

## OBJECTIVE:

To understand how to factor trinomials in the form  $ax^2 + bx + c$ , when  $a = 1$ .

## VOCABULARY:

- Distributive Property
- Factor
- Factors
- Trinomial
- Greatest Common Factor.

# FACTORING TRINOMIALS ( $a = 1.$ )

Watch this video on how to factor trinomials when  $a = 1.$  [AC Method when  \$a = 1.\$](#)

# PRACTICE

Factor Completely.

1.  $x^2 + x - 6$
2.  $x^2 - 13x + 36$
3.  $3x^3 + 27x^2 + 24x$
4.  $4x^2 + 12x - 40$

# SPECIAL FACTORING TECHNIQUES

## OBJECTIVE:

- To understand how to factor binomials in the form  $x^2 - y^2$ ,  $x^3 - y^3$ , and  $x^3 + y^3$ .

## VOCABULARY:

- Difference of Two Squares
- Difference of Two Cubes,
- Sum of Two Cubes.

# ACTIVITY

1) Multiply.  $(x - y)(x + y) =$

2) Multiply.  $(x - y)(x^2 + xy + y^2) =$

3) Multiply.  $(x + y)(x^2 - xy + y^2) =$

# DIFFERENCE OF TWO SQUARES

Watch this video on how to factor binomials using difference of squares. [Difference of squares.](#)

# PRACTICE

Factor Completely.

1.  $36x^2 - 49$

2.  $6x^2 - 24$

3.  $100x^2 + 144$



# SUM AND DIFFERENCE OF TWO CUBES

Watch this video on how to factor binomials using cubes. [Factoring perfect cubes.](#)

# PRACTICE

Factor Completely.

1.  $x^3 - 8$

2.  $x^3 + 216$

3.  $2x^3 - 54$