



# AYESHA ALI ACADEMY

A CBSE Senior Secondary Co-Educational School

(Operated By: Ayesha and Ali Padder Foundation, Kanipora Kulgam)

## GRADE 8 MATHEMATICS ASSIGNMENT

Chapters: Mensuration & Algebraic Expressions

Name: \_\_\_\_\_ Roll No.: \_\_\_\_\_ Section: \_\_\_\_\_

Date: \_\_\_\_\_

### Q1. CASE STUDY (MENSURATION)

A school plans to tile a rectangular courtyard measuring  $18\text{ m} \times 12\text{ m}$ . A  $2\text{ m}$  wide path is made all around the courtyard on the inside.

1. Find the area of the original courtyard.
2. Find the dimensions of the inner rectangular portion.
3. Calculate the area of the path.
4. If the cost of tiling the path is ₹250 per  $\text{m}^2$ , find the total cost.

### Q2. CASE STUDY (ALGEBRAIC EXPRESSIONS)

A stationery shop sells notebooks at ₹ $x$  each and pens at ₹ $y$  each. One day, a student buys 5 notebooks and 3 pens, while another student buys 2 notebooks and 7 pens.

1. Write the algebraic expression for the total amount paid by each student.
2. Find the combined amount paid by both students as a simplified algebraic expression.
3. If  $x = ₹40$  and  $y = ₹15$ , calculate the total amount collected.
4. Explain why algebraic expressions are useful in daily life.

### Q3. PROJECT-BASED ACTIVITY (MENSURATION)

Measure the length and breadth of any three rectangular objects at home or in school (e.g., table, notebook, classroom floor).

Prepare a table showing:

S. No.	Name of the Object	Length (cm/m)	Breadth (cm/m)	Perimeter	Area
1.					
2.					
3.					

Finally, write 4–5 sentences explaining where the concepts of perimeter and area are used in real life.

### Q4. PROJECT-BASED ACTIVITY (ALGEBRAIC EXPRESSIONS)

Create five real-life situations where algebraic expressions can be used.

For each situation:

- Write the algebraic expression.
- Explain what each variable represents.
- Substitute suitable values for the variables and calculate the result.
- Conclude how algebra helps solve real-life problems.

S. No.	Real-Life Situation	Algebraic Expression	Meaning of Variables	Substitution & Calculation	Conclusion
1.					
2.					
3.					
4.					
5.					

★ Best of Luck! ★