**LESSON PLAN**

**Subject:** Mathematics

**Topic:** Algebraic expressions

**Age of students:**16

**Language level:** B1, B2

**Time:** 45 min

**Content aims:**

After completing the lesson, the student will be able to:

Apply skills to read and write the expressions.

Understand different algebraic expressions.

Factorise the algebraic expressions.

Construct algebraic formulas.

**Language aims:**

After completing the lesson, the student will be able to:

Use new vocabulary within the topic.

Interpret and communicate mathematics.

**Pre-requisites:**

* Algebraic formulas;
* The ways of factorising the expressions.

**Key words:** sum, difference, square, cube, increased, decreased, formula, factorising

**Materials:** Worksheet “Algebraic expressions”.

**Procedure steps:**

1. Students do the exercise 1 in pairs.
2. Students read, listen, compare and discuss their point of view.
3. Students do the exercise 2 individually.
4. Students read, listen, compare and discuss their point of view.
5. Teacher revises the ways of factorising the expressions (taking common factor before the brackets; using formulas; grouping)
6. Students do the exercise 3 in pairs.
7. Students read, listen and compare.
8. Students play the game “Domino”.

**Attachment:**

**Algebraic expressions**

* + 1. *Write an algebraic expression for the quantity:*

a) Fifteen less than twice a number.

b) Three times a number, increased by seventeen.

c) The product of nine and a number, decreased by six.

d) Thirty divided by seven times a number.

e) Jenny earns $30 a day working part time at a supermarket. Write an algebraic expression to represent the amount of money she will earn in d days.

f) Three more than half a number.

g) One-fifth of a number reduced by double of the same number.

h) The first angle of a triangle is 16 degrees less than the second angle. The angle is double the second angle. Write algebraic expressions for these relations.

1. A census of a middle school found that the number of 7th graders was fifty more than the number of eighth graders. The number of sixth graders was three-fourths the number of eighth graders. Write algebraic expressions for these relations.
	* 1. *Determine whether the statement is true or false:*

a) The square of a number is greater than the number.

b) The square root of a number is less than the number.

c) The order of addends matters.

d) 12 divided by a number is less than 12.

e) 12 decreased by a number is less than 12.

f) 12 multiplied by a number is greater than 12.

g) The order of multipliers matters.

h) In division the order of numbers matters.

* + 1. *Match the formula and its name:*

|  |  |
| --- | --- |
| **1.**  | **A** Difference of cubes |
| **2.**  | **B** Difference of squares |
| **3.**  | **C** Sum of cubes |
| **4.**  | **D** Square of difference |
| **5.**  | **D** Cube of difference |
| **6.**  | **E** Cube of sum |
| **7.**  | **F** Square of sum |

**Game “Domino”**

