Subject: Mathematics

Level: S.2

Learning objectives
1. Content
Student should be able to:
practise expanding algebraic expressions

2. Language
Student should be able to:
read algebraic expressions correctly using technical wording such as “the square of”, “a plus two times ab”

S.1 Mathematics
Worksheet 1 for Student A

Name:_____ Class:_____ No.:_____ Date:_____

The following identities may be helpful to you while you work with your partner.

1. **$(a+b)(a-b) \equiv a^2-b^2$** read as

a plus b times a minus b is identical to the square of a minus the square of b .

2. $(a+b)^2 \equiv a^2+2ab+b^2$ read as

The perfect square of a plus b is identical to the square of a plus two times ab and then plus the square b

3. $(a - b)^2 \equiv a^2 - 2ab + b^2$ read as

The perfect square of a minus b is identical to the square of a minus two times ab and then plus the square b.

 Work in pairs

Student A reads questions 1-4 to Students B slowly.

Student B writes down what A says and uses the identities provided to expand the algebraic expressions one by one.
Student A writes down what B says in B's answer Column, (in mathematical symbol form)
In the Marking column, put a '✔' for the correct answer or a **'X'** for the wrong one.

Write down the total number of correct answers.

Questions	Correct Answer	B's answer	Marking
1. Expand $(x+4)(x-4)$	$x^2 - 16$		
2. Expand $(3x+2)(3x-2)$	$9x^2-4$		
3. Expand $(3x- 1)^2$	$9x^2-6x+1$		
4. Expand $(4x+3y)^2$	$16x^2+24xy+9y^2$		

The total number of correct answers _____

Now change roles.
Point out mistakes to your partner when both of you have finished. Check how to say correctly the ones you got wrong.

Worksheet 1 for Student B

Name:_____ Class:_____ No.:_____ Date:_____

The following identities may be helpful to you while you work with your partner.

1. $(a+b)(a-b) \equiv a^2-b^2$ read as

a plus b times a minus b is identical to the square of a minus the square of b .

2. $(a+b)^2 \equiv a^2+2ab+b^2$ read as

The perfect square of a plus b is identical to the square of a plus two times ab and then plus the square b

3. $(a - b)^2 \equiv a^2 - 2ab + b^2$ read as

The perfect square of a minus b is identical to the square of a minus two times ab and then plus the square b.

 Work in pairs

Student B reads questions 5-8 to Student A slowly.

Student A writes down what B says and uses the identities provided to expand the algebraic expressions one by one.
Student B writes down what A says in A's answer Column, (in mathematical symbol form)
In the Marking column, put a '✓' for the correct answer or a **'X'** for the wrong one.

Write down the total number of correct answers.

Questions	Correct Answer	A's answer	Marking
1. Expand $(x+4)(x-4)$	$x^2 - 16$		
2. Expand $(3x+2)(3x-2)$	$9x^2-4$		
3. Expand $(3x- 1)^2$	$9x^2-6x+1$		
4. Expand $(4x+3y)^2$	$16x^2+24xy+9y^2$		

The total number of correct answers _____

Now change roles.
Point out mistakes to your partner when both of you have finished. Check how to say correctly the ones you got wrong.