In a Year 10 middle attaining class you have invited the students to solve the following problem:

“When \( p = 2.8 \) and \( c = 1.2 \), calculate the expression: \( 3c^2 + 5p - 3(c-2) - 4p \).”

After working on the problem for some time you invite the students to share their solution with the class. The dialogue below follows:

YOU: Ok, let’s see what we can do with this question. Who wants to share their answer with me?

Student A and Student B raise their hands at the same time.

YOU: Student A?

STUDENT A: I found 10.

YOU: How did you find 10?

STUDENT A: I substituted the values 2.8 and 1.2 in the expression. It took me ages.

YOU: Thank you Student A! [To the class] Does everyone agree?

STUDENT B: I have the same answer but I did it so much quicker.

YOU: Go on…

STUDENT B: I worked out the expression before substituting the numbers and I ended up with a much simpler expression: \( p + 6c \). Then I substituted the values 2.8 and 1.2 and I found 10, easy!

STUDENT A: I like the way I did it; I don’t like simplifying.

STUDENT B: My solution is brilliant, yours takes ages. You cannot work with letters because you are thick [Some students are giggling] … what can I expect from you anyway? [Some students are laughing].

You heard what Student B said …

Questions:

a. How are you going to respond to Student A, to Student B and to the whole class?

b. What do you think are the issues in this situation?

c. How are you going to deal with these issues in the future?

Publications with reference to the *Simplification Task*


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