**Simplification Task**

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: \( 3c^2 + 5p - 3c(c-2) - 4p \).”

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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Let us know whether this task is useful at @mathtask or email Irene Biza at i.biza@uea.ac.uk. For more tasks, visit MathTASK.