

Mathematics: Specialist unit 3A syllabus clarification

Contact

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Teachers of Mathematics: Specialist unit 3A have requested clarification of syllabus item 4.5, which reads as follows:

4.5 solve, algebraically and geometrically, simple equations and inequalities involving absolute values of linear functions.

Specifically, teachers of this unit have asked:

- What is a “simple” equation here?
- What degree of difficulty is required without a calculator?

The following response to these questions was developed following consultation with the members of the Mathematics Reference Group:

Where $f(x)$ is a linear function, the solution of the following forms of simple equations and inequalities, is required algebraically and graphically, without the aid of a calculator .

$$|f(x)|=k, |f(x)|<k, |f(x)|>k, |f(x)|\leq k, |f(x)|\geq k$$

Where $f(x)$ and $g(x)$ are both linear functions, the solution of the following forms of equations and inequalities will be expected only with the aid of an appropriate calculator.

$$|f(x)|=|g(x)|, |f(x)|<|g(x)|, |f(x)|>|g(x)|, |f(x)|\leq|g(x)|, |f(x)|\geq|g(x)|$$

$$|f(x)|=g(x), |f(x)|<g(x), |f(x)|>g(x), |f(x)|\leq g(x), |f(x)|\geq g(x)$$

$$|f(x)\pm|g(x)||=k, |f(x)\pm|g(x)||>k, |f(x)\pm|g(x)||<k, |f(x)\pm|g(x)||\leq k, |f(x)\pm|g(x)||\geq k$$

$$|f(x)/g(x)|=k, |f(x)/g(x)|<k, |f(x)/g(x)|>k, |f(x)/g(x)|\leq k, |f(x)/g(x)|\geq k$$