

Activity 4 comments

1 Q22 (a) Yes Probably!

(b) The student has to **make at least one decision** on the strategy by which they will simplify the expression. For example, delay the substitution of the variables in terms of x to first of all reach a simplified expression in terms of a , b and c .

This is the best approach as it involves less algebra. The simplification requires a **succession of processes** in a non-standard question.

Not a standard question/ one the students will be familiar with.

A very demanding question.

2 Q14 (a) No

(b) Although there is a set of steps which the student must use to find the answer, the processes are quite clear and the student does not have to make a decision.

The correct calculation is, of course, $300 \times 9.5 \times (1 - 0.08)$ but most students will not see it as that.

This should be an accessible question to competent students on F Tier.

3 Q14 (c) No.

There is a well-known method (two/three actually) for doing this standard question. This does not mean it is a low demand question at F tier.

4 Q17 (a) Yes

(b) A crucial element of this problem is that the student has to add something to the given diagram in order to use standard circle theorems.

The student has to **decide** on a **strategy**.

At its simplest this means joining B to D and then using opposite angles of a cyclic quadrilateral, angle in a semi-circle and angle sum of a triangle.

An alternative is to join B to O.

5. Q19 (a) Yes

(b) Students are unlikely to have met this before (or if they have, not remembered it).

It is an **unfamiliar** setting; it is multistep where the student has several calculations to do.

Teachers usually do this by setting up a pair of simultaneous equations – **translating** into a form suitable for manipulation. In which case the problem requires use of techniques from **more than one content area**.