Stage 4 Mathematics student work sample – Grade E

Fraction Worksheet

Part 1

A student was asked to evaluate \( \frac{2}{3} + \frac{5}{6} \).

Here is her working:

\[
\begin{align*}
\frac{2}{3} + \frac{5}{6} & = \frac{12}{18} + \frac{15}{18} \\
& = \frac{27}{18} \\
& = \frac{3}{2} \\
& = 1 \frac{1}{2}
\end{align*}
\]

1. This student chose 18 as the common denominator.

Is this the lowest common denominator? No

Show how you can evaluate \( \frac{2}{3} + \frac{5}{6} \) using the lowest common denominator.

\[
\begin{align*}
\frac{2}{3} + \frac{5}{6} & = \frac{12}{18} + \frac{15}{18} \\
& = \frac{27}{18} \\
& = \frac{3}{2} \\
& = 1 \frac{1}{2}
\end{align*}
\]

2. Evaluate \( \frac{7}{10} + \frac{3}{4} \).

\[
\begin{align*}
\frac{7}{10} + \frac{3}{4} & = \frac{14}{20} + \frac{15}{20} \\
& = \frac{29}{20} \\
& = 1 \frac{9}{20}
\end{align*}
\]

Uses a common denominator to add proper fractions accurately and demonstrates a correct process for simplifying improper fractions.
Reese demonstrates an elementary understanding of the addition of fractions with a very limited level of competence shown in the relevant processes. The identification and accurate use of the lowest common denominator when adding fractions, the application of an appropriate process for the multiplication of fractions, the construction of an appropriate word problem for Question 3, and an appropriate diagram for Question 4 would enhance the response.

Reese’s response demonstrates characteristics of work typically produced by a student performing at a grade E standard.