Stage 4 Mathematics student work sample – Grade C

Fraction Worksheet

Part 1

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

Here is her working:

\[
\begin{align*}
\frac{2}{3} + \frac{5}{6} &= \frac{2 \times 2}{3 \times 2} + \frac{5}{6} \\
&= \frac{4}{6} + \frac{5}{6} \\
&= \frac{9}{6} \\
&= \frac{3}{2} \\
&= 1 \frac{1}{2}
\end{align*}
\]

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.

\[
\begin{align*}
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&= \frac{4}{6} + \frac{5}{6} \\
&= \frac{9}{6} \\
&= \frac{3}{2} \\
&= 1 \frac{1}{2}
\end{align*}
\]

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

\[
\begin{align*}
\frac{7}{10} + \frac{3}{4} &= \frac{7 	imes 2}{10 	imes 2} + \frac{3 	imes 5}{4 	imes 5} \\
&= \frac{14}{20} + \frac{15}{20} \\
&= \frac{29}{20} \\
&= 1 \frac{9}{20}
\end{align*}
\]

Identifies and uses the lowest common denominator to add proper fractions accurately and leaves answers as mixed numerals.
Marley demonstrates sound understanding of the addition and multiplication of fractions. Most routine problems have been solved accurately. The application of an appropriate process for the multiplication of mixed numerals, the construction of an appropriate word problem for Question 3, and an appropriate diagram for Question 4 would enhance the response.

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