Stage 4 Mathematics student work sample – Grade D

Fraction Worksheet

Part 1

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

Here is her working:

$$\frac{2}{3} + \frac{5}{6} = \frac{12}{18} + \frac{15}{18} = \frac{27}{18} = \frac{3}{2} = 1\frac{1}{2}$$

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.

$$\frac{2}{3} + \frac{5}{6} = \frac{2 \times 2}{3 \times 2} + \frac{5}{6} = \frac{4}{6} + \frac{5}{6} = \frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}$$

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

$$\frac{7}{10} + \frac{3}{4} = \frac{7 \times 2}{10 \times 2} + \frac{3 \times 5}{4 \times 5} = \frac{14}{20} + \frac{15}{20} = \frac{29}{20} = 1\frac{9}{20}$$

Identifies a common denominator

Shows evidence of a correct process for adding proper fractions and for simplifying improper fractions
Grade Commentary

Mackenzie demonstrates a basic understanding of the addition and multiplication of fractions. The processes used are applied inconsistently and with errors. The consistent and accurate application of appropriate processes for the addition, multiplication and simplification of fractions and a diagram for Question 4 would enhance the response.

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