

$$\frac{4}{2} \overset{\text{1}}{\nearrow} \frac{6}{3} = \frac{\overset{\text{This is important!}}{\textcircled{(3 \times 4)}} + \cancel{(2 \times 6)}}{\underset{\uparrow}{\cancel{2 \times 3}}} = \boxed{\frac{12 + 12}{6}} = \frac{24}{6} = \textcircled{4} \leftarrow \text{RESULT}$$

The diagram illustrates a common mistake in simplifying the fraction  $\frac{4}{2} \times \frac{6}{3}$ . The initial step shows the fraction  $\frac{4}{2}$  with a red arrow pointing to the denominator 2, labeled '1', indicating a simplification step. The next step shows the product  $\frac{6}{3}$  as a sum of two fractions:  $\frac{(3 \times 4) + (2 \times 6)}{2 \times 3}$ . The numerator is circled in red, and the denominator is crossed out with a green line. A red arrow points to the circled numerator, labeled 'This is important!'. A red arrow points to the crossed-out denominator, labeled 'WRONG!'. A green arrow points to the crossed-out denominator, labeled 'This multiplication is not necessary Try to simplify.' The final result is shown as  $\frac{12 + 12}{6} = \frac{24}{6} = 4$ , with the final result 4 circled in yellow and labeled 'RESULT'.

This multiplication is not  
 necessary Try to simplify.