

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

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 numerator 4, labeled '1'. The next step shows the fraction $\frac{6}{3}$ with a red arrow pointing to the denominator 3, labeled '1'. The resulting fraction is $\frac{(3 \times 4) + (2 \times 6)}{2 \times 3}$. The numerator is circled in red, and the denominator is crossed out with a green line. A green arrow points to the crossed-out denominator with the text "This multiplication is not necessary Try to simplify." A red arrow points to the circled numerator with the text "This is important!". The final result is 4, which is circled in yellow and labeled "RESULT".

This multiplication is not
 necessary Try to simplify.