

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

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 fraction $\frac{6}{3}$ with a red arrow pointing to the denominator 3, labeled '1', indicating a simplification step. The resulting fraction is $\frac{(3 \times 4) + (2 \times 6)}{2 \times 3}$. The numerator is $(3 \times 4) + (2 \times 6)$, and the denominator is 2×3 . The term (2×6) in the numerator is crossed out with a red line. The term 2×3 in 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 circle highlights the term (3×4) in the numerator, with the text "This is important!" above it. The word "WRONG!" is written in red above the fraction. The final result is $\frac{12 + 12}{6} = \frac{24}{6} = 4$, where the final 4 is circled in yellow and labeled "RESULT".

This multiplication is not
 necessary Try to simplify.