

$$\frac{4}{2} \times \frac{6}{3} = \frac{(3 \times 4) + \cancel{(2 \times 3)}}{\cancel{2 \times 3}} = \frac{12 + 12}{6} = \frac{24}{6} = 4$$

The diagram illustrates a common mistake in simplifying fractions. It shows the multiplication of $\frac{4}{2}$ and $\frac{6}{3}$. The first fraction is marked with a red arrow and a subscript '1'. The second fraction is simplified by canceling the 2 and 3 in the denominator. The numerator is calculated as $(3 \times 4) + (2 \times 3)$, where (3×4) is circled in red and labeled 'This is important!'. The term (2×3) is crossed out with a red line and labeled 'WRONG!'. The result is $\frac{12 + 12}{6}$, which is boxed in blue. This is then simplified to $\frac{24}{6}$ and finally to 4, which is circled in yellow and labeled 'RESULT'.

This multiplication is not
necessary Try to simplify.