

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

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 simplified by canceling the 2 in the denominator with the 4 in the numerator, leaving a 1. The second fraction is simplified by canceling the 3 in the denominator with the 6 in the numerator, leaving a 2. The resulting expression is $\frac{(3 \times 4) + (2 \times 6)}{2 \times 3}$. The diagram highlights that this is a "WRONG!" approach because the multiplication of the numerators and denominators is unnecessary. Instead, the fractions should be simplified first, resulting in $\frac{2}{1} \times \frac{2}{1} = 4$.

This multiplication is not
 necessary Try to simplify.