Quiz 1. *True/False*: The expression $12 \div 6 \cdot 2 + (-1)^3$ is the same as $\frac{12}{6 \cdot 2} + (-1)^3$ and both are equal to 0.

Solution. The statement is *false*. We can compute both, following order of operations (PEMDAS, applied carefully left-to-right), and show that the expressions evaluate to different values:

$$\begin{aligned} 12 \div 6 \cdot 2 + (-1)^3 \\ 12 \div 6 \cdot 2 - 1 \\ 2 \cdot 2 - 1 \\ 4 - 1 \\ 3 \end{aligned} \qquad \begin{aligned} \tfrac{12}{6 \cdot 2} + (-1)^3 \\ \tfrac{12}{6 \cdot 2} - 1 \\ \tfrac{12}{12} - 1 \\ 1 - 1 \\ 0 \end{aligned}$$

For these two expressions to be the same, the first needs a set of parentheses around the $6 \cdot 2$: $12 \div (6 \cdot 2) + (-1)^3$.