Quiz 1. *True/False*: If you had a bill of \$25.77 and were going to pay a tip of 20%, the total amount you would pay could be computed by finding $25.77(1.20)$.

Solution. The statement is *true*. Recall to calculate a percentage of a number N, we compute $N \cdot \%$, where N is the number and $\%$ is the percentage (written as a decimal). For instance, to compute 57% of 23, we compute $23(0.57) = 13.11$. To compute 172% of 150, we compute $150(1.72) = 258$. However, to compute a $\%$ percent increase or decrease of a number N, we compute $N(1 \pm \%)$, where N is the number, $\%$ is the percentage as a decimal, and we choose plus for increase and negative for decrease. For instance, to compute a 75% decrease of 13, we compute $13(1 - 0.75) = 13(0.25) = 3.25$. To compute a 115% increase of 120, we compute $120(1+1.15) = 120(2.15) = 258$. Here, we are increasing 25.77 by 20%, so we compute $25.77(1 + 0.20) = 25.77(1.20)$.