Quiz 1. *True/False*: $9/3 + 2(3^2 + 10) - 8 + 4 \cdot 3 = 45$
Solution. The statement is *false*. To see this, we can simply follow the order of operations—using PEMDAS as a guide:

$$\begin{aligned} 9/3 + 2(3^2 + 10) - 8 + 4 \cdot 3 &\stackrel{?}{=} 55 \\ 9/3 + 2(9 + 10) - 8 + 4 \cdot 3 &\stackrel{?}{=} 55 \\ 9/3 + 2(19) - 8 + 4 \cdot 3 &\stackrel{?}{=} 55 \\ 3 + 2(19) - 8 + 4 \cdot 3 &\stackrel{?}{=} 55 \\ 3 + 38 - 8 + 4 \cdot 3 &\stackrel{?}{=} 55 \\ 3 + 38 - 8 + 12 &\stackrel{?}{=} 55 \\ 41 - 8 + 12 &\stackrel{?}{=} 55 \\ 33 + 12 &\stackrel{?}{=} 55 \\ 45 &\neq 55 \end{aligned}$$

Quiz 2. *True/False*: $\gcd(2^3 \cdot 3 \cdot 5, 2 \cdot 3^2 \cdot 7) = 2^3 \cdot 3^2 \cdot 5 \cdot 7$.

Solution. The statement is *false*. Remember given a prime factorization of the numbers, we find the gcd by choosing the *smallest* powers of each prime that appears in the factorizations. So we should have $\gcd(2^3 \cdot 3 \cdot 5, 2 \cdot 3^2 \cdot 7) = 2 \cdot 3$. Instead, the largest power of each prime that appears in the factorizations was chosen which is how we compute the lcm. Therefore, we have $\operatorname{lcm}(2^3 \cdot 3 \cdot 5, 2 \cdot 3^2 \cdot 7) = 2^3 \cdot 3^2 \cdot 5 \cdot 7$.