Making Sense of Log Properties

1. If $x = 10^n$ and $y = 10^m$, then what is true?

a. $x + y = 10^n \, 10^m$
b. $x \cdot y = 100$
c. $x \cdot y = 10^{n+m}$
d. $x \cdot y = 10^n + 10$

2. When you multiply numbers with exponents, what can you always do with the exponents?

a. You add the exponents
b. You multiply the exponents
c. You divide the exponents
d. None of the above

3. When you take the log of a product, what do you do to the logs?

a. You divide the logs
b. You multiply the logs
c. You add the logs
d. You subtract the logs