
Common Algebra Mistakes

Fragment: Exponential Expression

The Mistake Fragment

Find the algebra mistake:

$$e^{t^2} e^t = e^{t^3}$$

Need a hint? Look carefully at the red part of the algebra:

$$e^{t^2} e^t = e^{t^3}$$

The Correction

$$e^{t^2} e^t = e^{t^2+t}$$

An Explanation

The exponents must be *added* when two exponential factors with a common base are multiplied together:

$$e^A e^B = e^{A+B}$$