
Common Algebra Mistakes

Fragment: Factoring

The Mistake Fragment

Find the algebra mistake:

$$\pi y^2 + 4y^2 = 4\pi y^2$$

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

$$\pi y^2 + 4y^2 = 4\pi y^2$$

The Correction

$$\pi y^2 + 4y^2 = (\pi + 4)y^2$$

An Explanation

The expression cannot be simplified by *multiplying* the coefficients of y^2 ; instead the coefficients must be *added*, since we must factor out the common y^2 from the sum. (Factoring in this way is the reverse of distributing multiplication over addition.)