
Common Pre-Algebra Mistakes

Example: Comparing Fractions

The Goal

Which is the smaller fraction:

$$\frac{1}{12} \text{ or } \frac{1}{28} ?$$

The Mistake

The smaller fraction is:

$$\frac{1}{12}$$

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

$$\frac{1}{12}$$

The Correction

The smaller fraction is:

$$\frac{1}{28}$$

An Explanation

When the numerators of two fractions are equal (they are both 1 in this mistake), the fraction with the *larger* denominator (namely, 28) is the smaller fraction.

Why?

If you think of fractions in terms of pieces of pizza, then you'll have a *smaller* piece if the pizza is divided into 28 pieces than if the pizza is divided into 12 pieces. $1/28$ of a pizza is smaller than $1/12$ of a pizza. The fraction $1/28$ is smaller than $1/12$.