**Theorem:** The numbers 1 and 2 are equal.

**Proof:** We want to show that

$$1 = 2.$$

Multiplying both sides of the equation by 2 we obtain

$$2 = 4.$$

Now, subtracting 3 from both sides of the equation, we deduce that

$$-1 = 1.$$

Squaring both sides of the equation, we get

$$1 = 1.$$

Since this is clearly a true equation, we can conclude that indeed $1 = 2$. ■