The well known Pythagorean theorem $x^2 + y^2 = z^2$ was proved to be invalid for other exponents. Meaning the next equation has no integer solutions:

$$x^n + y^n = z^n$$

$2 \cdot 7 + 3 \cdot (2 - 12) + 6 \cdot 2$

$3 - 5x + x^2 - 30(x + 3x^2) - 2$

$$2 \cdot 7 + 3 \cdot (2 - 12) + 6 \cdot 2$$

$$3 - 5x + x^2 - 30(x + 3x^2) - 2$$