

Mnemonic device for sum and difference of cubes:

Some people use the mnemonic "SOAP" for the signs; the letters stand for "same" as the sign in the middle of the original expression, "opposite" sign, and "always positive".

$$a^3 \pm b^3 = (a \text{ [same sign] } b)(a^2 \text{ [opposite sign] } ab \text{ [always positive] } b^2)$$