



■ 1  $(a^{\frac{1}{4}} - a^{-\frac{1}{4}})(a^{\frac{1}{4}} + a^{-\frac{1}{4}})(a^{\frac{1}{2}} + a^{-\frac{1}{2}}) = (a^{\frac{1}{2}} - a^{-\frac{1}{2}})(a^{\frac{1}{2}} + a^{-\frac{1}{2}}) = a + a^{-1}$

■ 2  $x^3 + x^{-3} = (x + x^{-1})^3 - 3xx^{-1}(x + x^{-1}) = 3^3 - 3 \cdot 3 = 18$