

Radicals & Rational Exponents (converting back and forth)

$$\sqrt[n]{x^p} = (\sqrt[n]{x})^p = x^{p/n}$$

Convert from radical form to rational exponents:

① ~~$\sqrt[3]{x^4}$~~ $\sqrt[4]{x^3} = x^{3/4}$

② $\sqrt[5]{(9x)^4} = (9x)^{4/5}$

③ $\sqrt[3]{5n} = (5n)^{1/3}$

④ $(\sqrt{m})^4 = m^{4/2} = \boxed{m^2}$

Convert from rational exponents to radical form:

① $x^{5/6} = \boxed{\sqrt[6]{x^5}}$

② $(3p)^{1/2} = \sqrt[2]{(3p)^1} = \boxed{\sqrt{3p}}$

③ $(7x)^{9/8} = \sqrt[8]{(7x)^9}$