

**nth roots****1)**

$$\begin{aligned}\pm\sqrt{36x^{10}} &= \pm\sqrt{36} \sqrt{(x^5)} \\ &= \pm 6x^{\frac{5}{2}}\end{aligned}$$

$$\begin{aligned}2) \quad \sqrt[3]{-216x^3y^{12}} &= \sqrt[3]{-216} \sqrt[3]{(xy^4)^3} \\ &= -6xy^4\end{aligned}$$

$$\begin{aligned}3) \quad \sqrt{-9x^4y^6} &= \sqrt{-1} \sqrt{9} \sqrt{(x^2y^3)^2} \\ &= \pm 3xy^{\frac{3}{2}}\end{aligned}$$