

$$1. \sqrt{14x} = (14x)^{1/2}$$

$$2. \frac{3}{\sqrt{2x}} = \frac{3}{(2x)^{1/2}} = 3(2x)^{-1/2}$$

$$3. \sqrt[6]{(x+4)^5} = (x+4)^{5/6}$$

$$4. \frac{3x-5}{\sqrt{x-5}} = \frac{3x-5}{(x-5)^{1/2}} = (3x-5)(x-5)^{-1/2}$$

$$5. \frac{1}{\sqrt[3]{(10x)^4}} = \frac{1}{(10x)^{4/3}} = (10x)^{-4/3}$$

$$6. 2x^2\sqrt{(x-y)^3} = 2x^2(x-y)^{3/2}$$