

فرمول	شرط	مثال
$(xy)^a = x^a y^a$		$(3y)^4 = 3^4 y^4 = 81y^4$
$\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$		$\left(\frac{3}{4}\right)^2 = \frac{3^2}{4^2} = \frac{9}{16}$
$\sqrt{xy} = \sqrt{x} \times \sqrt{y}$	اگر $x \geq 0$ و $y \geq 0$	$\sqrt{16x} = \sqrt{16} \times \sqrt{x} = 4\sqrt{x}$
$\sqrt{\frac{x}{y}} = \frac{\sqrt{x}}{\sqrt{y}}$	اگر $x \geq 0$ و $y \geq 0$	$\sqrt{\frac{25}{16}} = \frac{\sqrt{25}}{\sqrt{16}} = \frac{5}{4}$
$\sqrt[3]{xy} = \sqrt[3]{x} \times \sqrt[3]{y}$		$\sqrt[3]{27y^6} = \sqrt[3]{27} \times \sqrt[3]{y^6} = 3y^2$
$\sqrt[3]{\frac{x}{y}} = \frac{\sqrt[3]{x}}{\sqrt[3]{y}}$		$\sqrt[3]{\frac{125}{3}} = \frac{\sqrt[3]{125}}{\sqrt[3]{3}} = \frac{5}{\sqrt[3]{3}}$
$\sqrt{x^2} = x $		$\sqrt{(-5)^2} = -5 = 5$
$\sqrt{\frac{x}{y}} = \frac{\sqrt{x}}{\sqrt{y}} \times \frac{\sqrt{y}}{\sqrt{y}} = \frac{\sqrt{xy}}{y}$		$\sqrt{\frac{5}{6}} = \frac{\sqrt{5}}{\sqrt{6}} \times \frac{\sqrt{6}}{\sqrt{6}} = \frac{\sqrt{30}}{6}$
$\frac{1}{x\sqrt{y} + z\sqrt{w}} = \frac{1}{x\sqrt{y} + z\sqrt{w}} \times \frac{x\sqrt{y} - z\sqrt{w}}{x\sqrt{y} - z\sqrt{w}}$ $= \frac{x\sqrt{y} - z\sqrt{w}}{x^2y - z^2w}$		$\frac{x}{4 + \sqrt{x}} = \frac{x(4 - \sqrt{x})}{(4 + \sqrt{x})(4 - \sqrt{x})} = \frac{4x - x\sqrt{x}}{16 - x}$
$\sqrt[n]{a^m} = (\sqrt[n]{a})^m = a^{m/n}$		$\sqrt[3]{b^2} = (\sqrt[3]{b})^2 = b^{2/3}$

مای درس

