

$$\sqrt[3]{a} = rV \times \sqrt[3]{a^{10}} \rightarrow 1 = rV \times a^r \Rightarrow a^r = \frac{1}{rV}, a = \frac{1}{\sqrt[3]{rV}} = \frac{1}{r\sqrt[3]{V}} = \frac{\sqrt[3]{V}}{9} \quad 9$$

$$\frac{1}{\frac{\sqrt[3]{V}}{9}} - r = \frac{9\sqrt[3]{V}}{r} - \frac{9}{r} = \frac{9(\sqrt[3]{V}-1)}{r} = r\sqrt[3]{V} - r$$

$$\frac{r(\sqrt[3]{V}-1)}{1+\sqrt[3]{V}} \times \frac{1-\sqrt[3]{V}}{1-\sqrt[3]{V}} = \frac{r\sqrt[3]{V}-r}{1-\sqrt[3]{V}} = \frac{r(1-\sqrt[3]{V})}{-r} = 4 - r\sqrt[3]{V}$$

$$y = \sqrt{x+a}, z = \sqrt{x-f} \rightarrow y - z = r$$

$$y^2 - z^2 = (x+a) - (x-f) = a+f$$

$$\Rightarrow (y-z)(y+z) = a+f \rightarrow r(y+z) = a+f$$

$$y+z = \frac{a+f}{r} \rightarrow y+z = r = \frac{a+f}{r} - r = \frac{a}{r}$$