

$$\frac{46}{116) \lim_{x \rightarrow \infty} \left(\sqrt[3]{x^3 + x^2} - x \right) \frac{\sqrt[3]{(x^3 + x^2)^2 + x \sqrt{x^3 + x^2 + x^2}}}{\left(\sqrt[3]{x^3 + x^2} \right)^2 + x \sqrt{x^3 + x^2 + x^2}} = \lim_{x \rightarrow \infty} \frac{x^3 + x^2 - x^3}{\sqrt[3]{(x^3 + x^2)^2 + x \sqrt{x^3 + x^2 + x^2}}} = \lim_{x \rightarrow \infty} \frac{x^2}{\sqrt[3]{(x^3 + x^2)^2 + x \sqrt{x^3 + x^2 + x^2}}}$$

$$= \frac{\frac{x^2}{x^2}}{\sqrt[3]{\frac{x^6 + 2x^5 + x^4}{x^6} + \frac{x}{x} \sqrt{\frac{x^3 + x^2}{x} + \frac{x^2}{x^2}}}} =$$

$$\frac{1}{1+1+1} = \frac{1}{3}$$