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$$\sqrt{\frac{a^3+2a^2+a}{a^2+6a+9}} + \sqrt{\frac{a^3+4a^2+4a}{a^2+6a+9}} - \sqrt{\frac{a^3}{a^2+6a+9}} =$$
$$= \sqrt{\frac{a(a^2+2a+1)}{(a+3)^2}} + \sqrt{\frac{a(a^2+4a+4)}{(a+3)^2}} - \sqrt{\frac{a^3}{(a+3)^2}} =$$

$$= \left(\frac{1}{a+3}\right) \cdot \left(\sqrt{a(a+1)^2} + \sqrt{a(a+2)^2} - a\sqrt{a}\right) =$$

$$= \frac{1}{a+3} \cdot \sqrt{a} \cdot (\cancel{a+1} + a+2 - \cancel{a}) =$$

$$= \frac{1}{\cancel{a+3}} \cdot \sqrt{a} \cdot (\cancel{a+3}) = \sqrt{a}$$