

$$\textcircled{1} \quad \frac{1}{\frac{\sqrt{3}}{2} \cdot \frac{1}{2} + \frac{\sqrt{2}}{2} \cdot \frac{-1}{2}} = \frac{1}{\frac{\sqrt{3}}{4} + \frac{-\sqrt{2}}{4}} = \frac{1}{\frac{\sqrt{3}-\sqrt{2}}{4}}$$

$$= 1 \cdot \frac{4}{\sqrt{3}-\sqrt{2}} = \frac{4}{\sqrt{3}-\sqrt{2}}$$

$$\textcircled{2} \quad \frac{\frac{\sqrt{3}}{3} - (-1)}{1 + \frac{\sqrt{3}}{3} \cdot (-1)} = \frac{\frac{\sqrt{3}}{3} + 1}{1 - \frac{\sqrt{3}}{3}} = \frac{\frac{\sqrt{3}}{3} + \frac{3}{3}}{\frac{3}{3} - \frac{\sqrt{3}}{3}} = \frac{\frac{\sqrt{3}+3}{3}}{\frac{3-\sqrt{3}}{3}}$$

$$= \frac{\sqrt{3}+3}{3} \cdot \frac{3}{3-\sqrt{3}} = \frac{\sqrt{3}+3}{3-\sqrt{3}}$$

$$\textcircled{3} \quad \frac{1}{\frac{-\sqrt{2}}{2} \cdot \frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2} \cdot \frac{-1}{2}} = \frac{1}{\frac{-\sqrt{6}}{4} + \frac{-\sqrt{3}}{4}} = \frac{1}{\frac{-\sqrt{6}-\sqrt{3}}{4}}$$

$$= \frac{4}{-\sqrt{6}-\sqrt{3}}$$

$$\textcircled{4} \quad \frac{\frac{-\sqrt{3}}{3} + 1}{1 - \frac{-\sqrt{3}}{3} \cdot (1)} = \frac{\frac{-\sqrt{3}}{3} + \frac{3}{3}}{\frac{3}{3} + \frac{\sqrt{3}}{3}} = \frac{\frac{-\sqrt{3}+3}{3}}{\frac{3+\sqrt{3}}{3}} = \frac{-\sqrt{3}+3}{3+\sqrt{3}}$$

$$= \frac{-\sqrt{3}+3}{3+\sqrt{3}}$$

$$\textcircled{5} \quad \frac{1 + \frac{-\sqrt{3}}{3} \cdot (-1)}{\frac{-\sqrt{3}}{3} - (-1)} = \frac{\frac{3}{3} + \frac{\sqrt{3}}{3}}{\frac{-\sqrt{3}}{3} + \frac{3}{3}} = \frac{\frac{3+\sqrt{3}}{3}}{\frac{-\sqrt{3}+3}{3}} = \frac{3+\sqrt{3}}{3} \cdot \frac{3}{-\sqrt{3}+3}$$

$$= \frac{3+\sqrt{3}}{-\sqrt{3}+3}$$

$$\textcircled{6} \quad \frac{1 - \sqrt{3} \left(\frac{\sqrt{3}}{3}\right)}{\sqrt{3} + \left(\frac{\sqrt{3}}{3}\right)} = \frac{1 - \frac{3}{3}}{\sqrt{3} + \frac{\sqrt{3}}{3}} = \frac{1-1}{\sqrt{3} + \frac{\sqrt{3}}{3}} = 0$$

$$\textcircled{7} \quad \frac{\frac{7}{25} - \frac{3}{5}}{1 + \frac{7}{25} \cdot \frac{3}{5}} = \frac{\frac{7}{25} - \frac{15}{25}}{1 + \frac{21}{125}} = \frac{\frac{-8}{25}}{\frac{125}{125} + \frac{21}{125}} = \frac{\frac{-8}{25}}{\frac{146}{125}}$$

$$= \frac{-8}{25} \cdot \frac{125}{146} = \frac{-1000}{3650}$$

$$\textcircled{\frac{-20}{73}}$$

$$\textcircled{8} \quad \frac{\frac{7}{-12} - \frac{-3}{8}}{1 + \frac{7}{12} \cdot \frac{3}{8}} = \frac{\frac{-14}{24} + \frac{9}{24}}{1 + \frac{21}{96}} = \frac{\frac{-5}{24}}{\frac{96}{96} + \frac{21}{96}} = \frac{\frac{-5}{24}}{\frac{75}{96}}$$

$$= \frac{-5}{24} \cdot \frac{96}{75} = \frac{-480}{1800} = \textcircled{\frac{-4}{15}}$$