$$\sqrt[5]{375}\,\sqrt[15]{45} = \sqrt[5]{3\cdot 5^3}\,\sqrt[15]{3^2\cdot 5} = \sqrt[15]{3^3\cdot 5^9\cdot 3^2\cdot 5} = \sqrt[3]{3\cdot 5^2} = \sqrt[6]{2^2\cdot 5^4}$$

s így

$$\sqrt[5]{375}\sqrt[6]{600}\,\sqrt[15]{45} = \sqrt[6]{3^2\cdot 5^4}\sqrt[6]{2^2\cdot 3\cdot 5^2} = \sqrt[6]{2^3 3^3 5^6} = 5\sqrt{6}.$$