 \sqrt[3]{6*12} / \sqrt[4]{3^2} = \sqrt[3]{8*9} / \sqrt{3} =2 \sqrt[3]{9} / \sqrt{3} =2 \sqrt[6]{81/27} =2 \sqrt[6]{3} 

(5 ^{1/2} *5 ^{1/3} /5 ^{1/6} )^3=(5 ^{5/6}/5 ^{1/6} )^3=(5 ^{2/3} )^3=5^2=25 