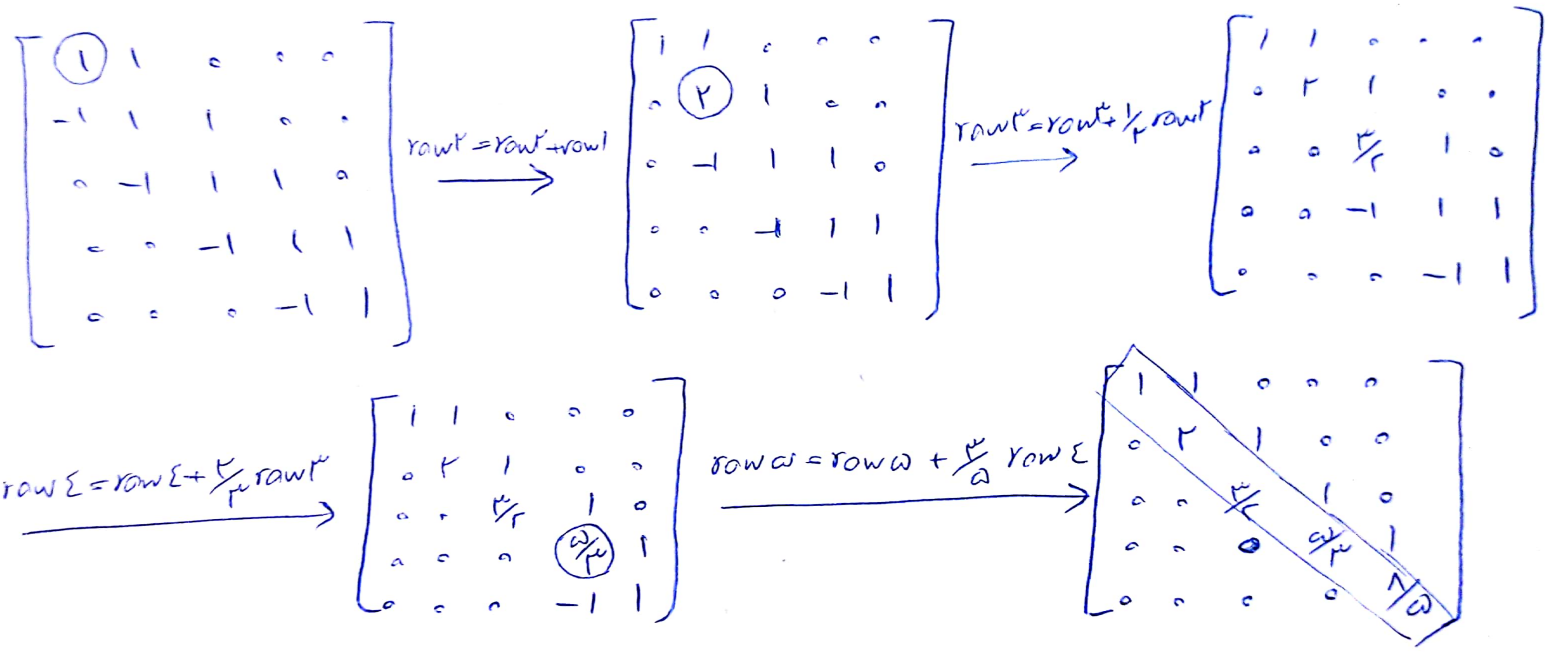

$$\det = 1 \times 2 \times \frac{3}{2} \times \frac{5}{3} \times \frac{8}{5} = 8$$