

Gabareito Homework 6

$$1) E = 0,173 - \frac{0,059}{2} \log \frac{[\text{GSH}]^2}{[\text{GSSG}][\text{H}^+]^2}$$

$$2) -0,270 = 0,173 - 0,0295 \log \frac{[\text{GSH}]^2}{[\text{GSSG}](10^{-7,4})^2}$$

$$15,02 = \log \frac{[\text{GSH}]^2}{[\text{GSSG}](10^{-7,4})^2}$$

$$1,04 \times 10^{15} = \frac{[\text{GSH}]^2}{[\text{GSSG}] \cdot 1,58 \times 10^{-15}}$$

$$\therefore \frac{[\text{GSH}]^2}{[\text{GSSG}]} \approx 1,65$$

$$3) -0,250 = 0,173 - 0,0295 \log \left(\frac{1,65}{[\text{H}^+]^2} \right)$$

$$14,34 = \log \left(\frac{1,65}{[\text{H}^+]^2} \right)$$

$$1,33 \times 10^{14} = 1/[\text{H}^+]^2$$

$$\therefore \text{pH} = 7,06$$