

1. Complete the following computations.

$$(10 \text{ km})^{1.2} = \underline{\hspace{4cm}}$$

$$R = (1000 \text{ kg})/\text{kg} \quad \log_{10}(R) = \underline{\hspace{4cm}}$$

2. Convert 25 kilometres travelled in 24 hours to speed in metre/second.

3. Theodosius Dobzhansky (1948) reported H, the genetic heterozygosity in the fruit fly *Drosophila pseudoobscura*.

Alt	H	H1	H2	H3	H4
850	0.70				
3000	0.69	_____			
4600	0.71				
6200	0.70				
8000	0.70		_____		_____
8600	0.62			_____	
10000	0.68				

Compute H normalized to its maximum value (H1), and to its minimum value (H2). Then compute H3 the deviation normalized to the mean. Compute H4 the deviation normalized to the standard deviation..

$$\text{std}(H) = 0.0304725$$

$$H1 = \frac{H}{\max(H)}$$

$$H2 = \frac{H}{\min(H)}$$

$$H3 = \frac{H - \text{mean}(H)}{\text{mean}(H)}$$

$$H4 = \frac{H - \text{mean}(H)}{\text{std}(H)}$$