

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

Alt	H	H1	H2	H3	H4
850	0.59				
3000	0.37	_____			
4600	0.41				
6200	0.40				
8000	0.31		_____		_____
8600	0.18			_____	
10000	0.20				

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.

std(H) = 0.139694

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

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

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

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

2. Convert 100 kilometres travelled in 24 hours to speed in metre/second.

3. Complete the following computations.

$(10 \text{ km})^{1.4} = \underline{\hspace{10em}}$

$R = (100 \text{ km})/(1 \text{ km}) \quad \log_{10}(R) = \underline{\hspace{10em}}$