

1. Calculate the two corresponding frequency distributions $F(Q=k)$, $RF(Q=k)$, and the corresponding relative frequency distribution $RF(Q \leq k)$ from the following cumulative frequency distribution $F(Q \leq k)$.

$F(Q=k)$	$RF(Q=k)$	$F(Q \leq k)$	$RF(Q \leq k)$
_____	_____	<u>2</u>	_____
_____	_____	<u>8</u>	_____
_____	_____	<u>18</u>	_____
_____	_____	<u>20</u>	_____

2. Write in exponents to show dimensions for the following quantities. The first example has been completed for you. The flux of the quantity Q has dimensions of $Q L^{-2} T^{-1}$

	<u>M</u>	<u>L</u>	<u>T</u>
Velocity	M^0	L^1	T^{-1}
vertical eddy diffusivity ($10^{14} \text{ m}^2 \text{ s}^{-1}$)	M	L	T
Upward flux of insects emerging from a lake (insect biomass)	M	L	T
vertical eddy diffusivity flux	M	L	T

3. Circle either I for Type I error or II for Type II error, in the following situations.

An oncologist mistakenly concludes that asbestos does not cause mesothelioma.	I	II
Pierre and Marie Curie handle the radioactive element radium without taking protective measures.	I	II
An pharmacologist mistakenly concludes that a new drug is effective.	I	II