## **KEY TERMS**

- **Frequency**: the number of times a value of the data occurs
- **<u>Relative frequency:</u>** the ratio (fraction or proportion) of the number of times a value of the data occurs in the set of all outcomes to the total number of outcomes
  - To find the relative frequencies, divide each frequency by the total number in the sample. Relative frequencies can be written as fractions, percents, or decimals.
- <u>**Cumulative relative frequency:**</u> the accumulation of the previous relative frequencies
  - To find the cumulative relative frequencies, add all the previous relative frequencies to the relative frequency for the current row.

Illowsky, B., & Dean, S. (2018). Introductory statistics.

**EXERCISE 1:** Mokauea loko i'a (fishpond) is in need of restoration to eventually be able to raise fish for consumption. A major factor in the pond's restoration is its temperature. The table below contains a sample of data on the pond's bottom temperature (rounded to the nearest tenth) from April 2020. Help us understand how the pond's temperature fluctuates by completing the table below. Round to the nearest thousandth.

Bottom Temperature (°C)	Frequency	Relative Frequency	Cumulative Relative Frequency
22.1	10	10 ÷ 1600 ≈ 0.006	0.006
23.2	64	64 ÷ 1600 = 0.040	0.006 + 0.040 = 0.046
23.9	123		
24.5	204		
25.7	218		
26.3	228		
26.9	204		
27.1	199		
27.4	212		
29.6	138		+= 1.00
	Total = 1600	Total = 1.000	

**EXERCISE 2:** Another major factor in the pond's restoration is its salinity. Salinity is measured in the unit of *PSU* stands for *Practical Salinity Unit* which is a unit based on the properties of seawater conductivity. The table below contains a sample of data on the pond's salinity (rounded to the nearest tenth) from March 2020. Help us understand how the pond's salinity fluctuates by completing the table below. Round to the nearest thousandth.

Salinity (PSU*)	Frequency	Relative Frequency	Cumulative Relative Frequency
27.8	418		
28.2	1423		
28.9	769		
29.4	476		
29.8	1373		
30.1	1233		
30.5	1447		
30.6	1871		
31.3	498		
31.4	259		
	Total =	Total = 1.000	