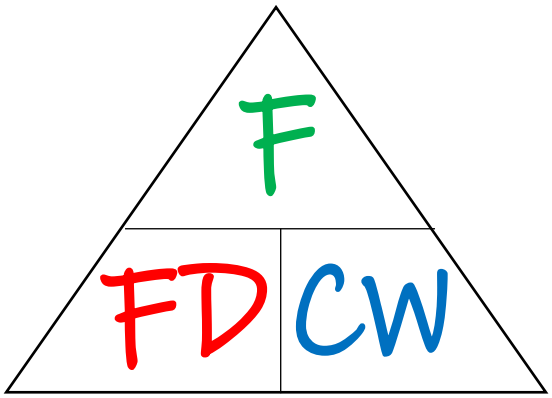
Histograms – Interpretting

A histogram is an example of a continuous bar chart which is best used for data with unequal class intervals.

Unlike a bar chart, the ***area*** of the bar is what represents the frequency rather than the height.



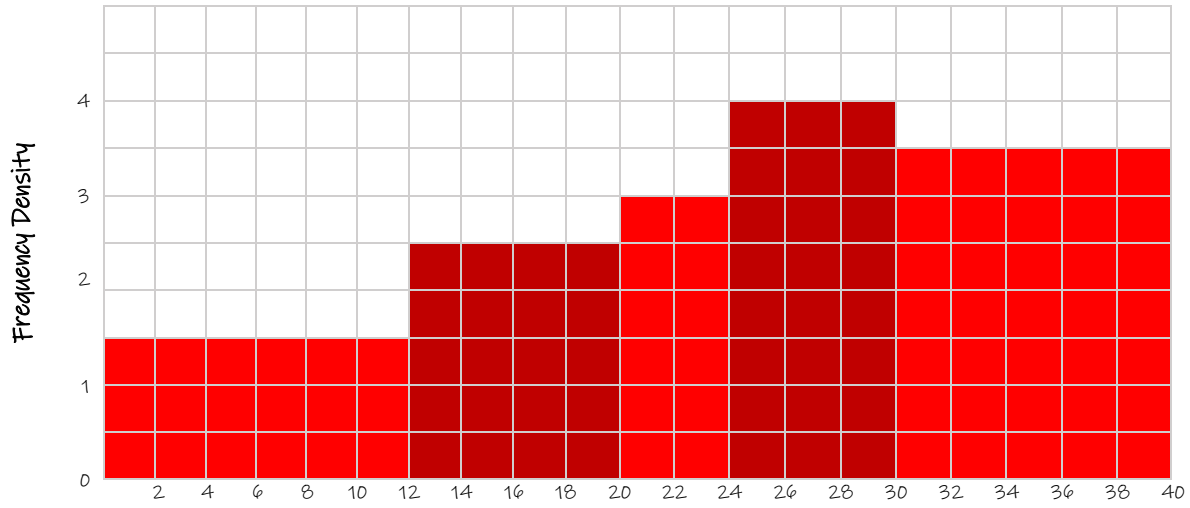
Using the formula triangle:

Frequency = Frequency Density X Class Width

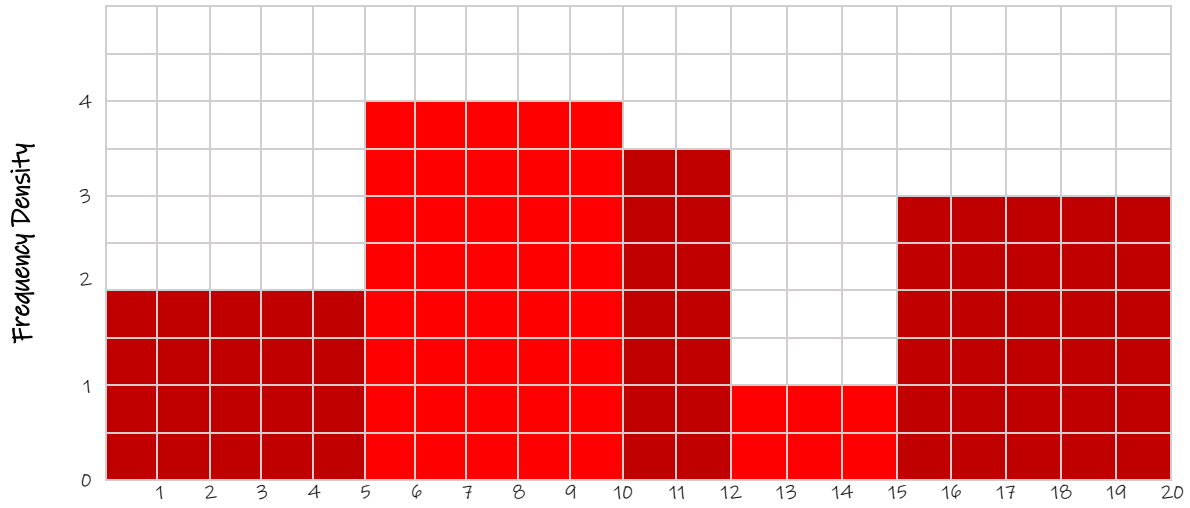
**where the class width is the difference between the lower and upper bound of the class*

This formula can be used for ***any*** class width, so if you are asked for a total between two value you may have to work out separate class widths and add them together

For each of the following histograms, complete the frequency table of data that goes with it



Depth, d (mm)	Frequency Density	Class Width	Frequency
$0 \leq l < 12$			
$12 \leq l < 20$			
$20 \leq l < 24$			
$24 \leq l < 30$			
$30 \leq l < 40$			



What is the total frequency for $0 \leq t < 10$? _____

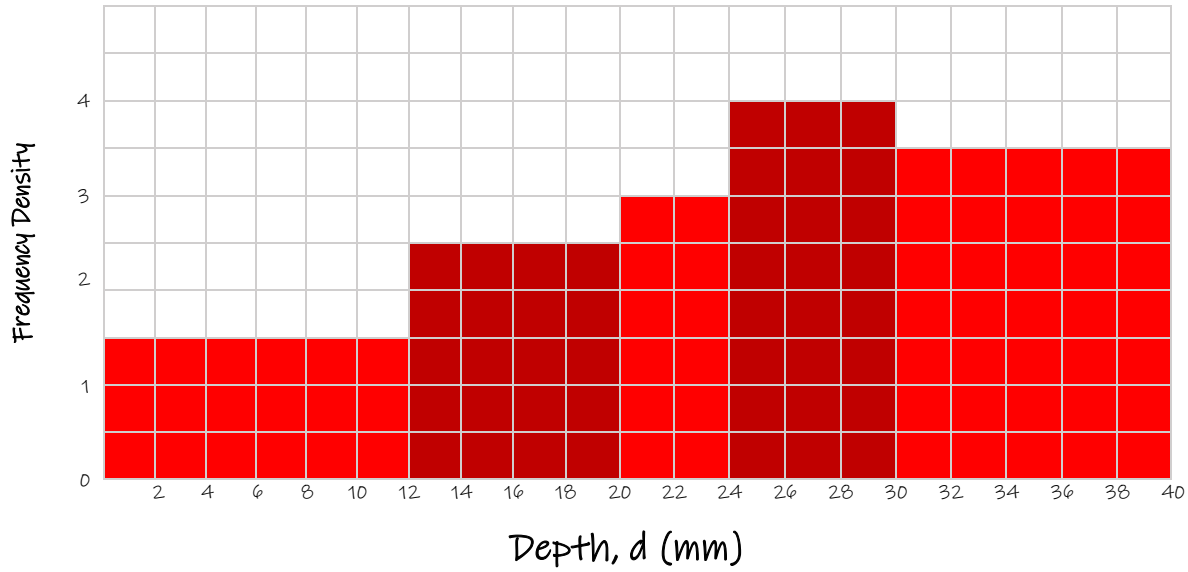
What is the total frequency for $11 \leq t < 15$? _____

What is the total frequency for $13 \leq t < 18$? _____

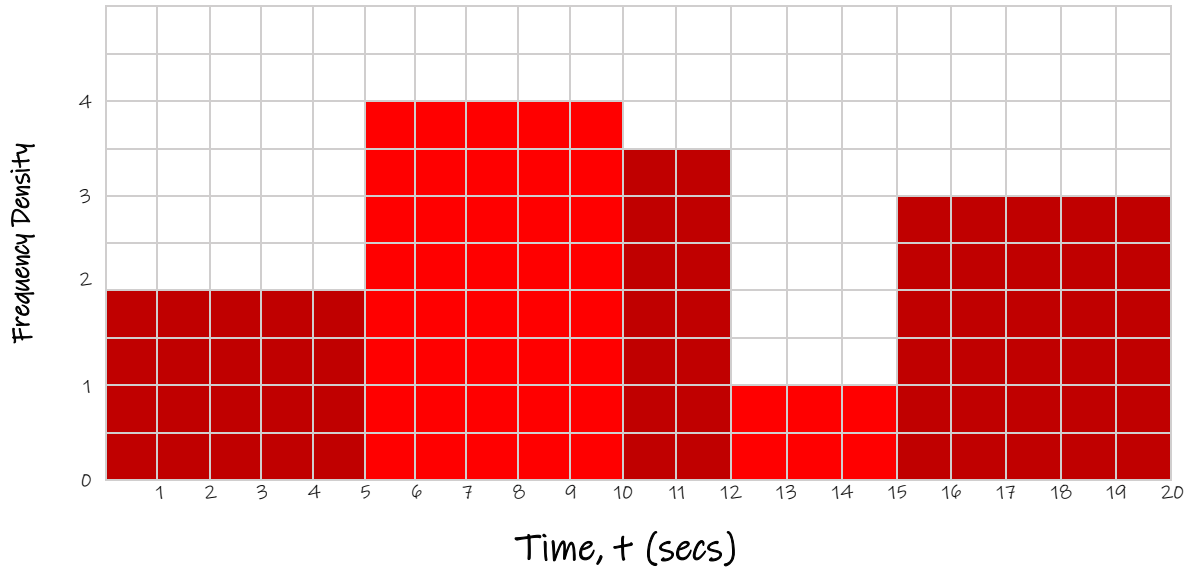
What is the total frequency for $12 \leq t$? _____

What is the total frequency for $t < 7$? _____

For each of the following histograms, complete the frequency table of data that goes with it



Depth, d (mm)	Frequency Density	Class Width	Frequency
$0 \leq l < 12$	1.5	12	1.5 x 12 = 18
$12 \leq l < 20$	2.5	8	2.5 x 8 = 20
$20 \leq l < 24$	3.0	4	3.0 x 4 = 12
$24 \leq l < 30$	4.0	6	4.0 x 6 = 24
$30 \leq l < 40$	3.5	10	3.5 x 10 = 35



What is the total frequency for $0 \leq t < 10$? 10 + 20 = 30

What is the total frequency for $11 \leq t < 15$? 3.5 + 3 = 6.5

What is the total frequency for $13 \leq t < 18$? 2 + 9 = 11

What is the total frequency for $12 \leq t$? 3 + 15 = 18

What is the total frequency for $t < 7$? 10 + 8 = 18