

Instructions for the student...

With fresh water supplies diminishing, the use of flow meters to regulate water consumption will become increasingly important. You are a new technician at a metal working shop which frequently uses fresh water to cool and lubricate several of their machines. In anticipation of upcoming mandatory regulation, you have proposed to your new bosses that the shop determine its current level of water usage. They like your idea so much that they have put you in charge of making this measurement.

In researching this question you quickly learn that flow meters be very costly to design and build so that they will always give the exact same measurement however, less expensive ones also exist. These cheaper models do not always give the exact same reading for consecutive measurements, only close to the same. This is okay because your particular application has more generous tolerances ! you do not need to break the bank and get the very best device.

You have found four different models "Schwartz Water Flow Meter, Wiemanator *Arlatron, and Jimmy, ees %lomometer-, for the same lesser price, that all perform well!enough for your intended application. There is more than one way to do this, but you have to use the same procedure

each device, so that a fair comparison may be made between graphs. Outline your procedure for converting the data provided below into a useful graphical representation, and show the resulting graph for each data set.

Notes...

- 0. The exact same procedure must be used for each device in creating the graphical representation.

measurement #	Schwartz Water Flow Meter			
1	10.03	9.77	11.15	9.91
2	9.73	9.72	11.52	9.88
3	10.06	10.30	10.68	10.00
4	9.93	10.15	10.76	9.97
5	10.26	10.05	11.05	10.43
6	10.16	10.23	11.19	9.41
7	9.99	9.99	10.96	10.57
8	9.50	9.98	11.18	9.22
9	10.13	10.25	11.32	10.26
10	9.61	9.90	11.03	9.05
11		10.51		
12		9.84		
13		10.18		
14		9.85		
15		9.81		
16		10.07		
17		9.45		
18		10.08		
19		9.93		

Instructions for the student...

Now that you have created a graphical representation of the water flow data, a decision needs to be made concerning which device to purchase. In the interest of being able to best recommend one of these devices over another to your bosses, you have decided to assign a **blue ribbon factor** to each of these four flow meters. This **blue ribbon factor** will be a measure of how well the device measures the flow rate of water.