MICROSOFT EXCEL BY EXAMPLE I

Requests

1. Open the ***PA1-2.xls*** file and save it on your folder.
1. Formatting the columns according with the type of variables as **Text** OR **Number without decimal**s.
2. Insert to the right of the column 'Year of diagnosis' a new column named 'Years from diagnosis'.
3. Display for each patient, using a formula, how many years passed from the diagnosis
4. Insert to the right of DBP column a new column named MAP-1 (Mean Arterial Pressure) and compute for each patient the MAP using the following formula (**Building formula by using Relative References**):

   $$MAP\text{-}1 = DBP + 1/3*(SBP - DBP)$$

   MAP is considered to be the perfusion pressure seen by organs in the body and takes normal values between 70 to 110 mmHg.
5. Insert to the right of MAP-1 column a new column named PP (Pulse Pressure) and compute for each patient the PP using the following formula (**Building formula by using Relative References**):

   $$PP = SBP - DBP$$

1. Insert to the right of PP column a new column named MAP-2 (Mean Arterial Pressure) and compute for each patient the MAP-2 using the following formula (**Building formula by using Relative References**) [1]:

   $$MAP\text{-}2 = DBP + 0.412*PP$$

1. Insert to the right of MAP-2 column a new column named MAP-3 (Mean Arterial Pressure) and compute for each patient the MAP-3 value using the following formula (**Building formula by using Relative References**) [2]:

   $$MAP\text{-}3 = DBP + 0.33*PP + 5$$

2. Insert to the right of MAP-3 column a new column named AM (Arithmetic mean of systolic and diastolic arterial pressure) and compute for each patient the AM value using the following formula (**Building formula by using Relative References**):

   $$AM = (SBP + DBP)/2$$

3. Insert to the right of AM column, a new column named GM (geometric mean of systolic and diastolic arterial pressure) and compute for each patient the GM value using the following formula (**Building formula by using Relative References**):

   $GM = \sqrt{(SBP * DBP)}$, where the function for root in Excel is SQRT

4. Insert to the right of GM column, a new column named HM (harmonic mean of systolic and diastolic arterial pressure) and compute for each patient the HM value using the following formula (**Building formula by using Relative References**):

   $$HM = (2*(SBP * DBP))/(SBP + DBP)$$

5. Insert to the right of HM column, a new column named QM (quadratic mean) and compute for each patient the value using the following formula (**Building formula by using Relative References**):

   $$QM = \sqrt{((SBP^2 + DBP^2)/2)}$$

6. Save the file and close all applications!

[1] Meaney E, Alva F, Meaney A, Alva J, and Webel R. Formula and nomogram for the sphygmomanometer calculation of mean arterial pressure. Heart 2000;84:64.

[2] Chemla D, Hebert JL, Aptecar E, Mazoit JX, Zamani K, Frank R, Fontaine G, Nitenberg A, and Lecarpentier Y. Empirical estimates of mean aortic pressure: advantages, drawbacks and implications for pressure redundancy. Clin Sci 2002;103:7-13.