Mean & SD Conversions

This Includes:

1) Median & Range:

If you want to estimate mean ($\bar{x}$)and standard deviation (σ) from median(m)& Range(R), define the following values:
1) Median(m)
2) The smallest value (a)
3) The largest value (b)
4) Sample size in each group (n)

Put each of which into the corresponding cell of the Inputs >> click calculate >>
you'll get the data presented by mean and standard deviation in the Outputs squares

Inputs								
	Intervention A				**Control**			
Study ID	**a**	**m**	**b**	**n**	**a**	**m**	**b**	**n**
Study 1								
Study 2								
Study 3								

Outputs				
	Intervention A		**Control**	
Study ID	**$\bar{x}$**	**σ**	**$\bar{x}$**	**σ**
Study 1				
Study 2				
Study 3				

The outputs was calculated upon the following equations:

A) Mean ($\bar{x}$) ≈ ((a+2m+b) /4) + ((a-2m+b) /4)

If the sample size was fairly large it can be calculated according to only
Mean ($\bar{x}$) ≈ ((a+2m+b) /4)

B) Standard deviation (σ):

If n< 15:

σ ≈ R/4 ≈ b-a/ √12

If 15 <n< 60:

σ ≈ R/4 ≈ b-a/4

If n>60:

σ ≈ R/6 ≈ b-a/6

References:

(1) 1. Hozo SP, Djulbegovic B, Hozo I. Estimating the mean and variance from the median, range, and the size of a sample. BMC medical research methodology. 2005;5(1):1-10.
2. Wan X, Wang W, Liu J, Tong T. Estimating the sample mean and standard deviation from the sample size, median, range and/or interquartile range. BMC medical research methodology. 2014;14:1-13.

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