PRACTICE

Calculate the sum, mean, variance, and standard deviation for the IELTS scores achieved by 8 EFL students over the period of three semesters.

Participants	**Time 1**			**Time 2**			**Time 3**		
student 1	2			3			4		
student 2	4			4			5		
student 3	3			5			5		
student 4	6			6			6		
student 5	4			4			5		
student 6	5			6			6		
student 7	3			4			4		
student 8	4			4			4		
Sum (Σ)									
Mean ($\bar{x}$)									
Variance (S^2)									
SD (S)									

- Which inferential statistical test should be used with the dataset above?

ANSWERS

Participants	**Time 1**	*(xi - $\bar{x}$)*	*(xi - $\bar{x}$)^2*	**Time 2**	*(xi - $\bar{x}$)*	*(xi - $\bar{x}$)^2*	**Time 3**	*(xi - $\bar{x}$)*	*(xi - $\bar{x}$)^2*
student 1	2	*-1.88*	*3.53*	3	*-1.50*	*2.25*	4	*-0.88*	*0.77*
student 2	4	*0.12*	*0.01*	4	*-0.50*	*0.25*	5	*0.12*	*0.01*
student 3	3	*-0.88*	*0.77*	5	*0.50*	*0.25*	5	*0.12*	*0.01*
student 4	6	*2.12*	*4.49*	6	*1.50*	*2.25*	6	*1.12*	*1.25*
student 5	4	*0.12*	*0.01*	4	*-0.50*	*0.25*	5	*0.12*	*0.01*
student 6	5	*1.12*	*1.25*	6	*1.50*	*2.25*	6	*1.12*	*1.25*
student 7	3	*-0.88*	*0.77*	4	*-0.50*	*0.25*	4	*-0.88*	*0.77*
student 8	4	*0.12*	*0.01*	4	*-0.50*	*0.25*	4	*-0.88*	*0.77*
SUM	**31.00**		*10.88*	**36.00**		*8.00*	**39.00**		*4.88*
MEAN	**3.88**			**4.50**			**4.88**		
VAR	**1.55**			**1.14**			**0.70**		
SD	**1.25**			**1.07**			**0.83**		

- The inferential test that should be used is the non-parametric Friedman test.