

STATISTICS 2
WS 2023/24 (Mag. Thomas Forstner)

Course-Number: 366.554

- 32) In a clinical experiment the effect of the actual time of measurement on the resting heart rate was examined. Five patients who suffered from a mitral valve prolapse were examined in the morning, at midday and in the evening. The research question is, if the heart rates vary over time.

	Resting heart rate [min ⁻¹]				
Morning	80	77	71	72	75
Midday	84	74	81	80	79
Evening	76	76	74	73	74

(Normal-distribution can be assumed.)

- a) Formulate appropriate statistical hypotheses for this research question.
- b) Choose an appropriate statistical test for evaluating if there is a global difference over time (type I error = 5%).