

## VI.

**NOTICE:** [ ] fill in the units in the square brackets

### Task: *Conductometry*

Key words: conductivity, Siemens unit, resistance, physiological saline solution

| sample                        | Temperature<br>[ ] | Conductivity [ ] |
|-------------------------------|--------------------|------------------|
| tap water                     |                    |                  |
| distilled water               |                    |                  |
| saturated salt solution       |                    |                  |
| physiological saline solution |                    |                  |
|                               |                    |                  |

### Discussion

Importance for the medicine / connection with the health and illness:

Possible errors and accuracy:

Conclusion:

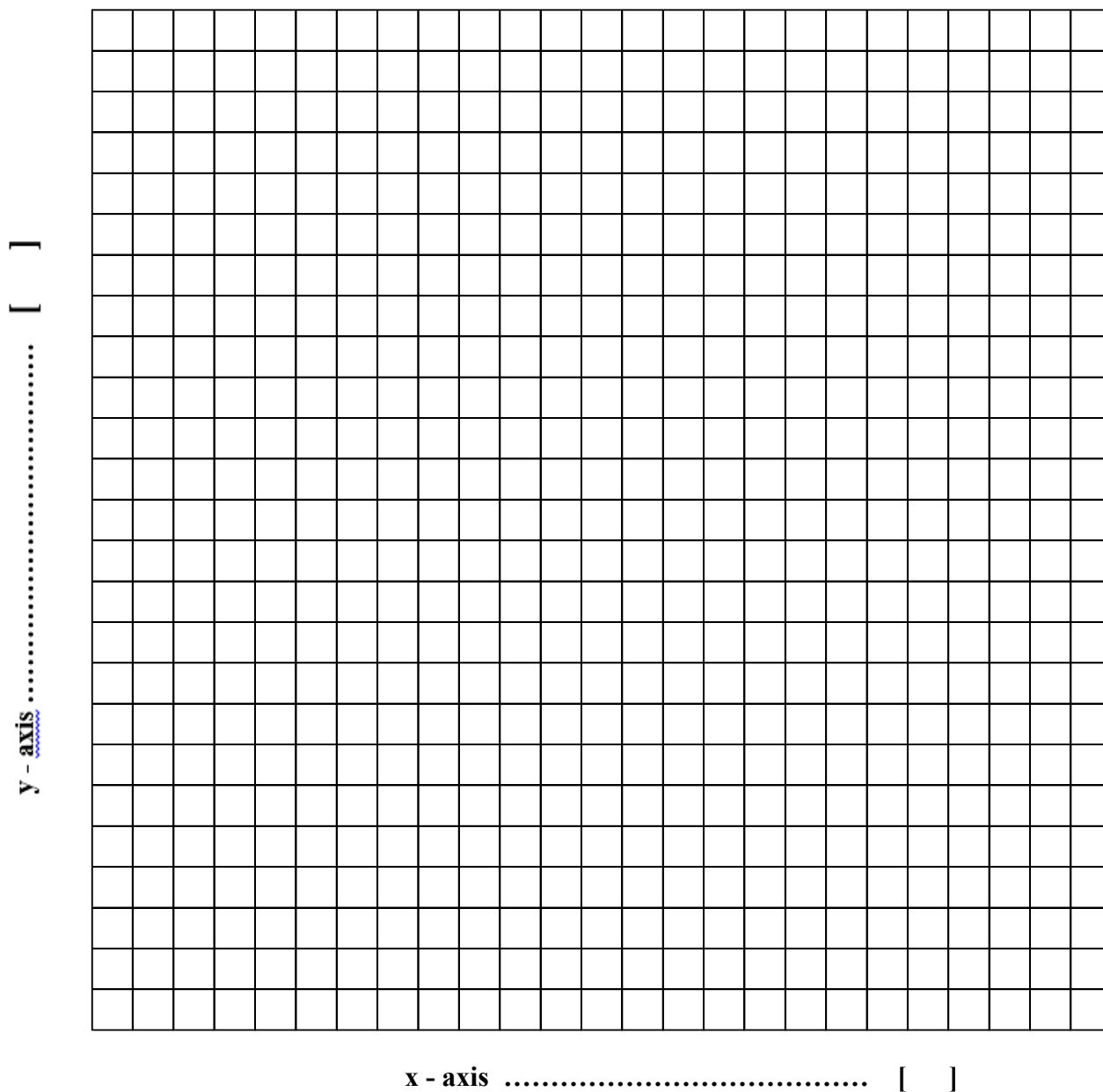
**Task: Audiometry**

Key words: sound intensity, level of intensity, decibel unit, hearing range

Measured values:

| Frequency (Hz) | Level of the intensity - left ear [ ] | Level of the intensity - right ear [ ] |
|----------------|---------------------------------------|--|
| 125            |                                       |  |
| 250            |                                       |  |
| 750            |                                       |  |
| 1000           |                                       |  |
| 1500           |                                       |  |
| 2000           |                                       |  |
| 3000           |                                       |  |
| 4000           |                                       |  |
| 6000           |                                       |  |
| 8000           |                                       |  |

Graphs of the dependence of threshold level of the intensity (Y axis) on frequency (X axis) - both left and right ears. Highlight (eg with a circle) the minimal and maximal values:



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**Task: Doppler ultrasonic flowmeter**

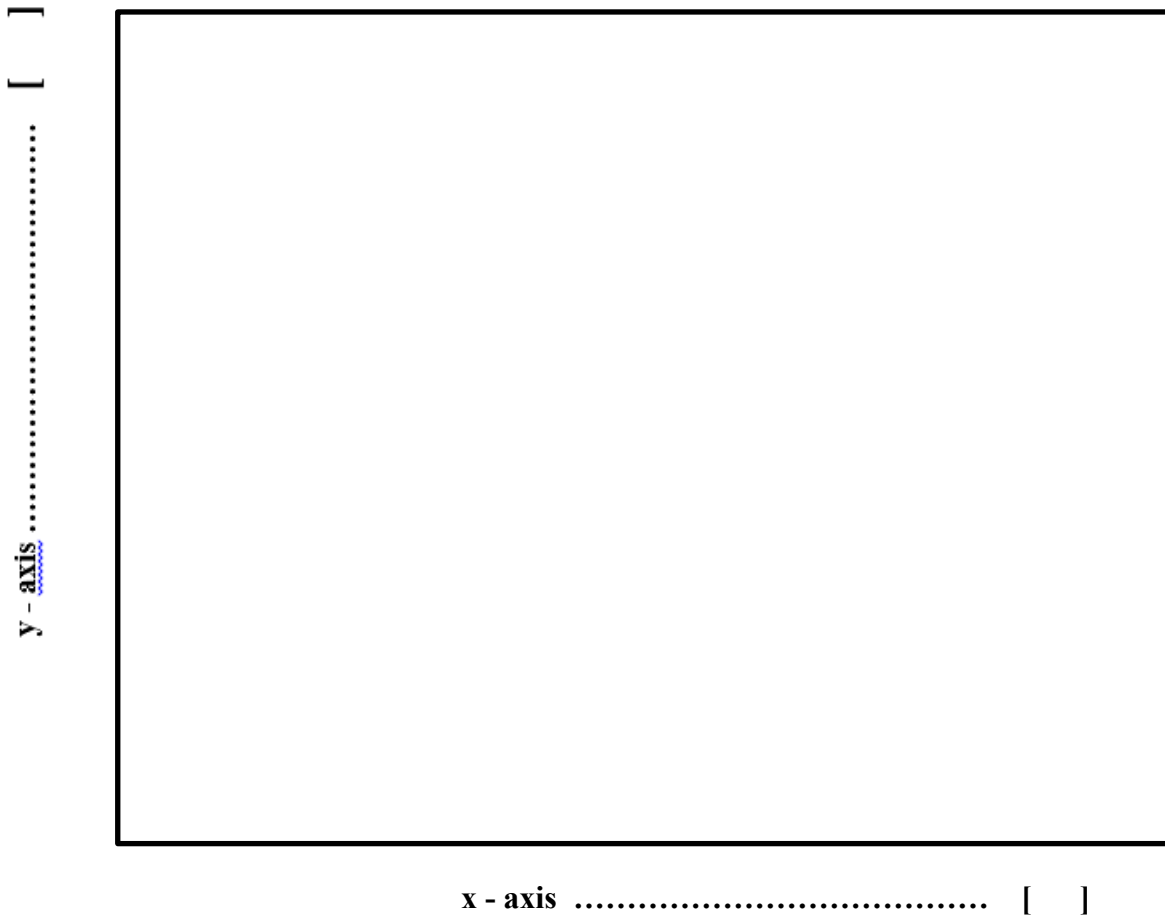
*Key words: ultrasound, doppler effect, systole, diastole*

(You will measure the rate of blood flow - velocity - over time in this task. The flow rate changes as the heart muscle contracts = systole and dilates=diastole)

Measured values:

|                   | Left hand -velocity [     ] | Right hand- velocity [     ] |
|-------------------|-----------------------------|------------------------------|
| Systolic section  |                             |                              |
| Diastolic section |                             |                              |

Plot the waveform of doppler signal for right or left hand (redraw the graph from the device display):



Discussion

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Possible errors and accuracy:

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