## Homework 21

1. Speed of sound in water $1450 \mathrm{~m} / \mathrm{s}$. What is the distance between two closest pints oscillating in the opposite phases (the phase difference is $\pi$ ) if the oscillation frequency is equal to 725 Hz ?
2. What is the train velocity v at which the 44 cm long pendulum starts oscillating at high amplitude if the distance between the rail connections is 25 m ?
3. The speed of the waves is $360 \mathrm{~m} / \mathrm{s}$ at the frequency of 450 Hz . What is the difference of oscillation phases between two points separated by 20 cm ?
