4 December 2023 Phys 111 Fall 2023

Question 1

Two strings are made from the same material and are stretched under the same tension. One string is longer than the other.

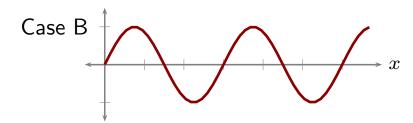
Which of the following is true?

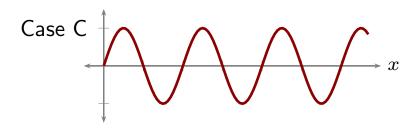
- 1. The wavespeeds are the same for the two strings.
- 2. The wavespeed is higher for the longer string.
- 3. The wavespeed is lower for the longer string.

Question 2

Snapshots of three waves on strings are illustrated.

Case A





Which of the following ranks these in order of wavelength?

1.
$$\lambda_{A} > \lambda_{B} = \lambda_{C}$$

2.
$$\lambda_A < \lambda_B = \lambda_C$$

3.
$$\lambda_{A} = \lambda_{B} < \lambda_{C}$$

4.
$$\lambda_{A} = \lambda_{B} > \lambda_{C}$$

5.
$$\lambda_A = \lambda_B = \lambda_C$$