**SPH3U 8.4 Determining Wave Speed**

1. **The universal wave equation**

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| Universal wave equation: |  |

A harp string supports a wave with a wavelength of 2.3 m and a frequency of 220.0 Hz. Calculate its wave speed.

A trumpet produces a sound wave that is observed travelling at 350 m/s with a frequency of 1046.50 Hz. Calculate the wavelength of the sound wave.

1. **Factors that affect wave speed**

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| Rigidity: |  |
| Temperature: |  |
| Linear density: |  |
| equation |  |
| Speed of a wave on a string: |  |

On your class wave machine, you have a string of mass 350 g and length 2.3 m. You would like to send a wave along this string at a speed of 50.0 m/s. What must the tension of the string be?

**Homework:** page 391: #1-3, 7