NAME _____ HOUR _____ DATE _____

UNIT 9
WAVES STUDY SHEET

1. **The speed of transverse waves on a spring is 15 m/s. if the source produces a disturbance every 0.2 seconds, what is the wavelength of the waves produced?**

2. **If a wave generator produces 10 meter-long waves every 4 seconds, calculate the wave speed.**

3. **The violin 'A' string (440 Hz) has a length of 30 cm. At what speed does the fundamental frequency travel along the string?**

4. **A trumpet is an open tube with a length of 150 cm. Calculate the lowest note (fundamental frequency) that it can play. Assume v = 340 m/s.**

5. **What is a standing wave? How is it formed?**

6. **What type of interference produces nodes? Anti-nodes?**

7. **What is resonance? What conditions lead to its production?**

8. **A rope, fixed at both ends, is vibrated by a machine at a fixed frequency (similar to the class demo). If the rope is places under more tension, what will happen to wavelength? Why?**

9. **Describe the difference between and longitudinal waves. Give an example of each.**

10. **A microwave is simply a chamber with waves passing through it to heat up food. What is the danger of allowing the microwaves to become standing waves? How is this prevented?**