Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ Ast: \_\_\_\_\_

**Wave Questions**

1. What is the equation for the velocity of a wave?
2. A wave with a frequency of 250 Hz has a wavelength of 4 m. How fast is the wave travelling?
3. A radio wave with a wavelength of 120 m has a frequency of 5000 Hz. What is its speed?
4. A wave with a wavelength of 100 m is travelling past a radio tower. If 240,000 crests pass that location in one minute, how fast is the wave moving?
5. A wave is moving at a speed of 30 m/s. If its wavelength is 2 meters, what is its frequency?
6. 15 wave crests pass by a single point in a span of 10 seconds. If the wave is moving at a speed of 3 m/s, what is its wavelength?
7. What is the frequency of a wave if it is travelling at 300,000,000 m/s and its wavelength is 0.00000065 m (650 nm)?
8. A wave has a frequency of 85 Hz. If it is travelling at a speed of 85 m/s, what is its wavelength?
9. You are standing outside during super howlout. Mr. Howard is flying his drone low over your head. As it approaches you, it is giving off a high-pitched buzz. However, as it passes you and continues on, the buzz changes to a lower pitch. Did the drone’s buzz actually change, or just your perception? What causes this?
10. Mr. Lynch starts his car, but a wiring malfunction causes the horn to sound, giving off a constant “BEEEEEEEEEEEEEEEEEEEEEEEP”. Describe how the horn would sound as Mr. Lynch drives down the road toward the mechanic’s shop from the perspective of:
    1. Mr. Lynch driving the car:
    2. A person standing on the sidewalk as Mr. Lynch drives past:
    3. The mechanic waiting for him at the shop as he pulls into the parking lot: