Assignment 2

1. State if the following is a qualitative or a quantitative statement.
   - It's very cold outside.
   - The temperature is 20°C.
   - It's raining.
   - The wind speed is 10 m/s.

2. Which of the following is a constant and which is a variable?
   - Speed of light vs. distance
   - Time vs. distance
   - Mass vs. volume
   - Temperature vs. pressure

3. What is the relationship between temperature and the volume of a gas?
   - Direct proportionality
   - Inverse proportionality
   - No relationship
   - Linear relationship

4. Which of the following statements is true?
   - Work equals force times distance.
   - Energy equals work plus heat.
   - Power equals work divided by time.
   - Heat equals work minus power.

5. What is the relationship between pressure and volume?
   - Direct proportionality
   - Inverse proportionality
   - No relationship
   - Linear relationship

6. Which of the following statements is true?
   - Work equals force times distance.
   - Energy equals work plus heat.
   - Power equals work divided by time.
   - Heat equals work minus power.

7. What is the relationship between temperature and the volume of a gas?
   - Direct proportionality
   - Inverse proportionality
   - No relationship
   - Linear relationship

8. Which of the following statements is true?
   - Work equals force times distance.
   - Energy equals work plus heat.
   - Power equals work divided by time.
   - Heat equals work minus power.