Name: _____ Date: _____ Period: _____

To determine the domain of a given situation, identify all possible x-values (input/independent variable).

To determine the range of a given situation, identify all possible y-values (output/dependent variable).

Ex: A local theater sells admission tickets for $5 on Friday nights. At capacity the theater holds 200 customers.

Amount collected depends on **number of tickets** sold.

Dependent Variable: **Amount collected**
Independent Variable: **# of tickets**
<mark>Discrete</mark> or Continuous?
Domain: **{0, 1, 2, ..., 200}**
Range: **{0, 5, 10, ..., 1000}**

Ex: Jack earns $8.50 working at Walmart. His parents are worried about him keeping up with his grades, so he is allowed to work a maximum of 10 hours each week.

Amount of money earned depends on **number of hours** worked.

Dependent Variable: **Amount earned**
Independent Variable: **Number of hours worked**
Discrete or <mark>Continuous</mark>?
Domain: **[0, 10] or 0 ≤ x ≤ 10**
Range: **[0, 85] or 0 ≤ y ≤ 85**

Using the above examples as a guide, complete the following questions.

1. The high school is selling admission tickets to a play for $9. At capacity the auditorium holds 100 customers.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range:

2. Joy's grandmother makes homemade jars of jelly during the holidays to raise money for the local foodbank. She earns a profit of $2.50 for each jar she sells.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range:

3. On Amazon Prime Day, Amazon offers copies of Call of Duty Modern Warfare for $45 each. Amazon has only 100 copies in stock.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range:

4. Bill earns $9 per hour at his part time job. Because he goes to school full time, he can work a maximum of 16 hours each week.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range:

5. A supply ship can carry a maximum cargo weight of 160,000 pounds. A company uses one of these ships to deliver 2,000-pound containers.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range:

6. Hazel charges $15 per hour to clean houses. She also charges $10 for cleaning supplies. Because Hazel has so many clients, she refuses to spend more than 4 hours cleaning a single house.

_____ depends on _____

Dependent Variable:
Independent Variable:
Discrete or Continuous?
Domain:
Range: