Graphing and Solving Systems of Equations – **Word Problems**
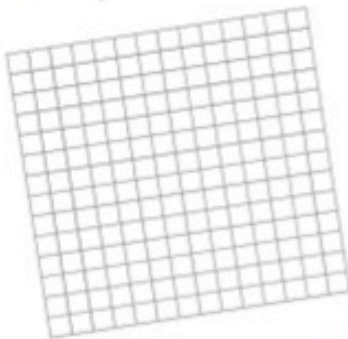
Directions: For each problem, determine the independent (x) and dependent (y) variables by annotating the text. Write the system of equations. Graph the system to answer the questions that follow.

1. A GameSwap membership costs $20 and includes one game per month for $5. Non-members can get one game a month for $7.

   Independent variable (x): _____ Dependent variable (y): _____

   System of equations: {
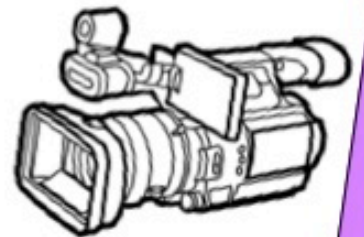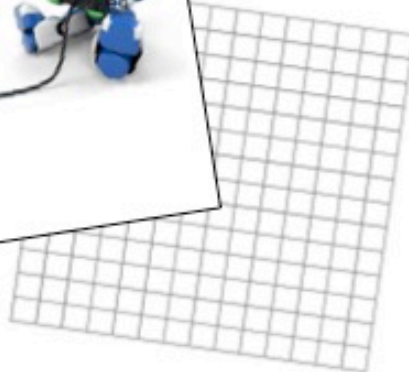
   Graph:

   a. When does it make more sense to be a member? How do you know?

...nt a video camera for your school project. Murphy's Camera charges a $30 rental ...day. Allied Rental charges a $45 rental fee plus $30 per day. Which company ...e?

   ...ble (x): _____ Dependent variable (y): _____

   {

   a. When does it make more sense to rent a camera from Murphy's? How do you know?

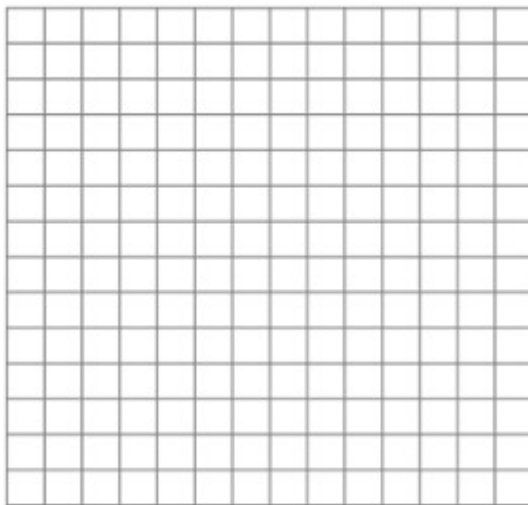# Solving Systems of Equations Word Problems – Classwork

Directions: For each problem, determine the *independent (x)* and *dependent (y)* variables by annotating the text. Write the system of equations. Graph the system to answer the questions that follow.

1. A GameSwap membership costs $20 and includes one game per month for $5. Non-members can get one game a month for $7.

   Independent variable (x): _____ Dependent variable (y): _____

   System of equations: $\Big\{$

   Graph:

   a. When does it make more sense to be a member? How do you know?

   b. When does it make more sense to be a non-member? How do you know?

   c. Is there ever a time where it wouldn't matter whether you were a member or not? Explain.

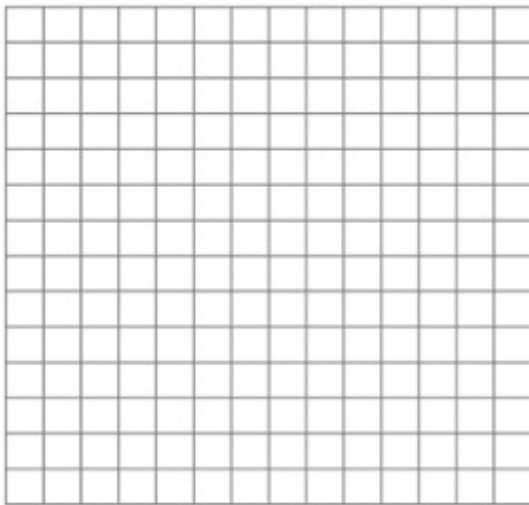   d. If you were a <u>member</u>, how much would you pay all together after 2 years? Show your work.

Solving Systems of Equations Word Problems – Classwork

2. To rent scooters, Sam's Scooters charges a $30 fee plus $8 per hour. Rosie's charges a $20 fee plus $10 per hour.

   Independent variable (x): _____ Dependent variable (y): _____

   System of equations: $\Bigg\{$

   Graph:

   a. When does it make more sense to rent a scooter from Rosie's? How do you know?

   b. When does it make more sense to rent a scooter from Sam's? How do you know?

   c. Is there ever a time where it wouldn't matter which store to choose? Explain.

   d. If you were renting a scooter from Rosie's, how much would you pay if you were planning on renting for 7 hours? Show your work.
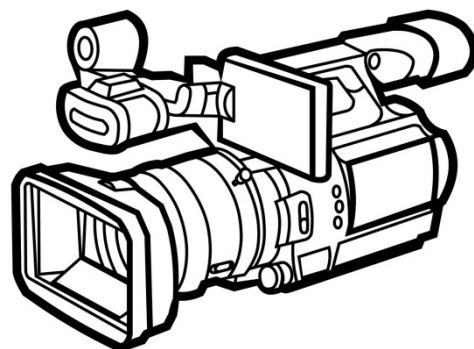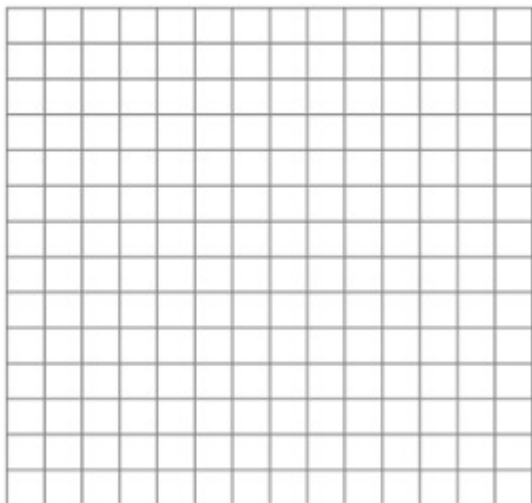
Solving Systems of Equations Word Problems – Classwork

3. You need to rent a video camera for your school project. Murphy's Camera charges a $30 rental fee plus $35 per day. Allied Rental charges a $45 rental fee plus $30 per day. Which company should you choose?.

Independent variable (x): _____ Dependent variable (y): _____

System of equations: $\Big\{$

Graph:

a. When does it make more sense to rent a camera from Murphy's? How do you know?

b. When does it make more sense to rent a camera from Allied Rental? How do you know?

c. Is there ever a time where it wouldn't matter which store to choose? Explain what this means in the context of a "system of equations."

d. If you were renting a camera for 3 days, how much money would you pay for each store? Show all work.

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