

## Solving Systems of Equations Word Problems

1. Use two different variables to represent the unknowns.  
 Let  $x =$  \_\_\_\_\_  
 Let  $y =$  \_\_\_\_\_
2. **Translate** the two relationships in the problem into two different equations.
3. **Solve** the system of equations.
4. **Check** your answers in **both** equations.
5. Write your answer in a **statement**.

Examples:

1. Tickets for a high school dance cost \$1.00 each if purchased in advance of the dance but \$1.50 if bought at the door. If 100 tickets were sold and \$120 was collected how many tickets were sold in advance and how many were sold at the door?

Let $x =$	Solve:	Check one:	Statement:
Let $y =$		Check two:	
Equations:			

2. Four bats and 9 baseballs cost \$76.50. Three bats and a dozen baseballs cost \$81. Find the price of 1 bat and 1 baseball.

Let $x =$	Solve:	Check one:	Statement:
Let $y =$		Check two:	
Equations:			

3. A hardware store earned \$956.50 from renting ladders and power tools last week. The store charged for a total of 36 days for ladders and 85 days for power tools. This week the store charged 36 days for ladders and 70 days for power tools, and earned \$829. How much does the store charge per day for ladders and for power tools?

Let $x =$	Solve:	Check one:	Statement:
Let $y =$			
Equations:		Check two:	

4. A dealer sold 200 tennis racquets. Some were sold at \$36 each and the rest were sold at \$66 each. The total receipts from these sales were \$9600. How many racquets did he sell at \$36 each?

Let $x =$	Solve:	Check one:	Statement:
Let $y =$			
Equations:		Check two:	

5. A test has twenty questions worth 100 points. The test consists of True/False questions worth 3 points each and multiple choice questions worth 11 points each. How many multiple choice questions are on the test?

Let $x =$	Solve:	Check one:	Statement:
Let $y =$			
Equations:		Check two:	