

**Word Problems: Systems of Equations**

Name: \_\_\_\_\_

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(Show work for credit.)

Set up a system of equations for each problem. Then, solve each system by whatever mathematical means you like.

- 1) John bought tickets and chairs for his softball team. He bought 10 total items and spent \$2000. Each ticket cost \$100 and each chair cost \$50. Let  $x$  represent the number of tickets and  $y$  represent the number of chairs. How many tickets and chairs did he buy?
- 2) Mrs. Pyle sold 100 cookies for her bake sale. She sold two types of cookies: large-diameter chips and small-ginger butter cookies. She charged \$1 for the chocolate chips and \$0.50 for the peanut butter cookies and collected \$170 total. How many of each type did she sell?
- 3) Peter's Store sold 100 total items from the shelves with 400 pens (\$2 each) and 1000 pencils (\$1 each) from available. It took \$100 to make. How many pens and how many pencils did it sell?
- 4) Penelope's Printing Press primarily sold 3 main products and 10 unit pens to the public. It sold 1000 printing sheets and took in \$20.00 in sales. How many pens and how many pencils did Penelope's Printing Press sell?
- 5) Greg "Overlord" Barnack used to collect cards as a child hobby. He had 80 CDs, which were rock and pop CDs. He bought his CDs at a trade rate \$4 for rock and \$2 for pop CDs. If his collection was worth \$200, how many of each type of CD did he own?
- 6) 10th grade has two interlocking programs. The science department and mathematics course each receive the course every week, which is a total of 100 items. She charges \$40 for mathematics and \$20 for mathematical sciences. Every week, she takes in \$2000 in revenue. How many amounts of each type from the program?
- 7) These manufacturers Maroon and American flags. Due to the rate of sales, she charges \$20 for Maroon flags and \$15 for American flags. She sold every night flags and accumulated \$4000. How many flags of each type did she sell?
- 8) Kaitie Stone had a special one-time-only sale for her. It sold 20 for \$1 and 100 for \$2. It sold 40 tickets as a single day and received \$100. How many tickets and of which type were sold?