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Accelerated  
Solving Systems of Equations Using Matrices  
Unit 1

For each problem show the equations, the matrices, and state the answer.

1. Find the equation of a line going through the points  $(-1, 2)$  and  $(3, -4)$ .
  
  
  
  
  
  
  
  
  
  
2. Find the equation of a line going through the points  $(0, 4)$  and  $(5, 0)$ .
  
  
  
  
  
  
  
  
  
  
3. Find the equation of a parabola containing the points  $(2, -1)$ ,  $(4, -1)$  and  $(3, -2)$ .
  
  
  
  
  
  
  
  
  
  
4. Find the equation of a parabola containing the points  $(-4, 2)$ ,  $(-3, 0)$ , and  $(-2, 2)$ .
  
  
  
  
  
  
  
  
  
  
5. A group of 148 people is spending five days at a summer camp. The cook ordered 12 pounds of food for each adult and 9 pounds of food for each child. A total of 1,410 pounds of food was ordered. Find the total number of adults and children in the group.
  
  
  
  
  
  
  
  
  
  
6. The owner of a movie theater was counting the money from 1 day's ticket sales. He knew that a total of 150 tickets were sold. Adult tickets cost \$7.50 each and children's tickets cost \$4.75 each. If the total receipts for the day were \$891.25, how many of each kind of ticket were sold?

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7. There were 100 more balcony tickets than main-floor tickets sold for a concert. The balcony tickets sold for \$4 and the main-floor tickets sold for \$12. The total amount of sales for both types of tickets was \$3,056. Find the number of balcony tickets that were sold.
8. Ben had twice as many nickels as dimes. Altogether, Ben had \$4.20. How many nickels and how many dimes did Ben have?
9. Arielle has a collection of grasshoppers and crickets. She has 561 insects in all. The number of grasshoppers is twice the number crickets. Find the number of each type of insect that she has.
10. Ms. Martin has a total of 8 snickers and tootsie roll pops in her candy jar at home. She totaled up the calories to be 375 calories. If each snicker is 100 calories and each tootsie roll is 15 calories, how many of each candy does Ms. Martin have?