

NAME: \_\_\_\_\_

## UNIT 2 • REASONING WITH EQUATIONS AND INEQUALITIES

### Lesson 2: Solving Systems of Equations

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#### Problem-Based Task 2.2.1: Ticket Sales

Tickets sales to the local gaming convention, PlayerCon, are on the rise! Sales of 2-day tickets brought in \$188,100. A total of 6,600 tickets were sold. Adult 2-day tickets cost \$36.00 and children's 2-day tickets cost \$26.00. How many of each kind of ticket were sold?

Sales of 3-day tickets to PlayerCon brought in \$347,600. The combined cost of one 3-day adult ticket and one 3-day children's ticket is \$90. One-third more adult 3-day tickets were sold than adult 2-day tickets. One-fifth more 3-day children's tickets were sold than 2-day children's tickets. What was the cost of 3-day adult tickets and 3-day children's tickets?

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#### Problem-Based Task 2.2.1: Ticket Sales

##### Coaching

- a. What equation can be written to represent the total number of 2-day tickets sold?
  
  
  
  
  
- b. What equation can be written to represent the total amount of sales of 2-day tickets?
  
  
  
  
  
- c. How can you use the equations from parts a and b to find the number of adult 2-day tickets sold and the number of children's 2-day tickets sold?
  
  
  
  
  
- d. What equation can be written to represent the total price of one 3-day adult ticket and one 3-day children's ticket?
  
  
  
  
  
- e. How many 3-day adult tickets were sold if there were one-third more 3-day adult tickets sold than 2-day tickets?
  
  
  
  
  
- f. How many 3-day children's tickets were sold if there were one-fifth more 3-day children's tickets sold than 2-day tickets?
  
  
  
  
  
- g. What equation can be written to represent the total amount of sales of 3-day tickets?
  
  
  
  
  
- h. How can you use the equations from parts d and g to find the price of adult 3-day tickets and the price of children's 3-day tickets?