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Systems of Equations Story Problems - Practice Worksheet

Name: _____ Date: _____

Instructions: Read each story problem carefully, define your variables, write a system of two equations, and solve. Show all work.

1. Two numbers add up to 20. One number is 4 more than the other. Find both numbers.

2. A bag of apples and a bag of oranges together cost $7. The apples cost $1 more than the oranges. How much does each bag cost?

3. A school store sells pens for $1 each and notebooks for $3 each. Maria buys 8 items and spends $16. How many pens and notebooks did she buy?

4. Two trains leave the same station traveling in opposite directions. Train A travels at 60 mph and Train B at 80 mph. After how many hours are they 420 miles apart?

5. The sum of two numbers is 35. Twice the larger number minus the smaller number equals 55. Find both numbers.

6. A movie theater charges $9 for adults and $5 for children. One evening, 100 tickets were sold for a total of $660. How many adult and child tickets were sold?

7. A chemist mixes a 20% acid solution with a 50% acid solution to get 60 mL of a 30% acid solution. How many mL of each solution are needed?

8. Jake has $5 bills and $10 bills in his wallet. He has 12 bills totaling $90. How many of each bill does he have?

9. A boat travels 36 miles downstream in 2 hours and 36 miles upstream in 3 hours. Find the speed of the boat in still water and the speed of the current.

10. At a bake sale, cookies sell for $0.50 each and brownies for $1.25 each. Sofia sold 40 items and collected $35. How many cookies and brownies did she sell?

Answer Key

1. 12 and 8
2. Apples = $4, Oranges = $3
3. Pens = 4, Notebooks = 4
4. 3 hours

5. Larger = 30, Smaller = 5
6. Adults = 40, Children = 60
7. 20% solution = 40 mL, 50% solution = 20 mL
8. $5 bills = 6, $10 bills = 6
9. Boat speed = 15 mph, Current speed = 3 mph
10. Cookies = 20, Brownies = 20