

Name: _____

Extra Systems Applications Practice

Write a system of equations to model each situation. Solve by any method. Write your answer in a complete sentence.

1. A Beach Resort is offering two weekend specials. One includes a 2-night stay with 3 meals and cost \$195. The other includes a 3-night stay with 5 meals and costs \$300. What is the cost of a 1-night stay and what is the cost per meal?

$$\begin{aligned} 2n + 3m &= 195 \\ 3n + 5m &= 300 \end{aligned}$$

Answer: _____

2. Lee bought 5 shirts and 3 ties at the Clothes Outlet for \$102. Brian bought 8 shirts and 3 ties for \$147. What is the price of a shirt and the price of a tie at the Clothes Outlet?

a. shirt: \$9 tie: \$15 b. shirt: \$10 tie:\$5 c. shirt: \$15 tie: \$9 d. shirt: 5\$ tie:\$12

3. A mix of quarters and dimes is worth \$2.30. There are a total of 11 coins. How many of each coin are there?

Answer: _____

4. One number is 10 less than 4 times another number. Their sum is 20. What are the two numbers?

$$\begin{aligned} 4n - 10 &= x \\ n + x &= 20 \end{aligned}$$

Answer: _____

Homework – More Application Practice



- Show work on a separate sheet of paper
- Set up a system of equations for each problem, solve by any algebraic method and the question with a sentence.

6. Last week, Alysia went shopping and bought four shirts and three pairs of pants for \$85.50. This week, Malaysia went shopping and bought three shirts and five pairs of pants for \$115.00. What is the price of each shirt and each pair of pants?



7. At Shannon's Bakery, single-crust apple pies cost \$6.99 and double-crust cherry pies cost \$10.99. The total number of pies sold on Friday was 36. If Shannon collects \$331.64, how many of each type of pie were sold?



8. Billy's Used Cars dealership is selling 2013 SUVs for \$24,500 and the 2012 model for \$21,995. On a busy Saturday, Billy sold 11 SUVs for \$259,480. How many for each year's model SUVs were sold?

9. One number is 8 more than 3 times another number. Their sum is 68. What are the two numbers?

10. Two groups of students order burritos and tacos at El Dorado's Mexican Restaurant. One order of three burritos and four tacos cost \$11.33. The other order of nine burritos and five tacos cost \$23.56. Find the cost of a taco and the cost of a burrito.

