

Name _____



Linear Equation Word Problems

1. Fredrick owns a bakery where he sells bagels and muffins. He noticed that on a typical day, he sells 50 bagels and 30 muffins, making a total revenue of \$350. If bagels are priced at \$4 each and muffins at \$3 each, how many of each does he need to sell to make \$500?
2. Sarah is planning to rent a car for a road trip. She finds a rental company that charges \$40 per day plus \$0.25 per mile driven. If she plans to drive 300 miles in 4 days, how much will she pay in total for the rental?
3. James works at a bookstore and earns a base salary plus a commission on the books he sells. Last month, he earned \$600 with a base salary of \$300 plus \$2 for every book sold. How many books did he sell last month?
4. A farmer wants to build a rectangular pen for his livestock. He has 400 feet of fencing material and wants to maximize the area of the pen. What dimensions should he use for the pen?
5. A company manufactures two types of laptops: basic and premium. The basic laptops require 5 hours of assembly time and 2 hours of testing time, while premium laptops require 8 hours of assembly time and 3 hours of testing time. If the company has 400 assembly hours and 150 testing hours available, how many of each type can they produce to maximize profit?
6. Emily is saving for a trip and plans to put money into two different accounts. Account A offers 4% interest per year, while account B offers 6% interest per year. She wants to earn \$200 in interest per year from her savings. How much should she invest in each account if she has a total of \$5000 to invest?
7. A shipping company charges \$10 per package plus \$2 for every pound over 5 pounds. If a package weighs 8 pounds, how much will it cost to ship?
8. A car rental company offers two pricing plans for a weekend rental. Plan A charges \$50 per day and \$0.30 per mile driven, while Plan B charges \$70 per day with unlimited mileage. For what mileage will the total cost of Plan A and Plan B be the same for a two-day rental?
9. Maya bought some pens and notebooks for school. She paid \$20 for 3 pens and 4 notebooks. Later, she bought 5 pens and 6 notebooks for \$30. How much does each pen and notebook cost?
10. A train travels from City A to City B at an average speed of 60 mph and returns at an average speed of 40 mph. If the total travel time for the round trip is 10 hours, what is the distance between the two cities?