

Name _____



Linear Equation Word Problems

1. Alice is starting a small business selling handmade jewelry. She invests \$2000 in materials and spends 10 hours making each piece. She plans to sell each piece for \$50. How many pieces of jewelry must she sell to break even?
2. A catering company charges \$30 per person for a buffet lunch and \$500 for setup. They also charge \$10 per person for beverages. If they made \$2000 catering an event, how many people attended, assuming everyone had beverages?
3. Emma is saving for a trip. She puts \$1000 in a savings account with a 3% annual interest rate and \$1500 in another account with a 5% annual interest rate. If she earns \$80 in interest after a year, how much did she put in each account?
4. A company produces two types of tablets. Type X costs \$150 to produce and sells for \$300, while Type Y costs \$200 to produce and sells for \$400. If the company aims to make a total profit of \$10,000 by selling both types, how many of each type must they sell?
5. Jason is investing in stocks. He invests \$4000 in Company A, which has an annual return rate of 6%, and \$6000 in Company B, which has an annual return rate of 8%. If his total annual return is \$520, how much did he invest in each company?
6. A truck rental company charges \$100 per day for a standard truck and \$150 per day for a luxury truck. They rented out a total of 20 trucks for \$2400 in revenue. How many standard trucks and luxury trucks did they rent?
7. A coffee shop sells two types of coffee beans. Bean A costs \$8 per pound, while Bean B costs \$12 per pound. The shop wants to create a blend costing \$10 per pound. How many pounds of each type should they use to make 50 pounds of the blend?
8. Sarah is training for a marathon. She plans to increase her running distance by 0.5 miles each day. If she starts with a 2-mile run and continues this pattern for a month, how many miles will she run in total by the end of the month?
9. A shipping company charges a base rate of \$50 plus \$2 per mile for deliveries within the city. For deliveries outside the city, they charge a base rate of \$80 plus \$3 per mile. If a delivery costs \$110 and is 15 miles outside the city, how many miles is it to deliver within the city?
10. A gym offers two membership plans. Plan A charges a \$50 enrollment fee plus \$30 per month. Plan B charges a \$30 enrollment fee plus \$40 per month. How many months will it take for the total cost of Plan B to equal the total cost of Plan A?