

Name _____



Linear Equation Word Problems

1. Jessica is planning a hiking trip with her friends. They plan to hike a total of 15 miles over the course of 3 days. If they hike 1 mile more each day than the previous day and the total distance is divided equally among the days, how many miles will they hike each day?
2. 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?
3. A car rental company charges \$40 per day plus \$0.25 per mile for a standard car. For a luxury car, they charge \$100 per day plus \$0.50 per mile. If a customer rents a car for 5 days and drives 300 miles, which car type would be cheaper for them?
4. A landscaping company charges a base rate of \$50 plus \$2 per square foot for materials. For an additional \$25, they offer to apply a protective coating to the garden bed, regardless of its size. If a customer pays \$275 for a job that requires 100 square feet of materials, how much did the protective coating cost?
5. Alex and Bailey are participating in a charity run. Alex can run at a speed of 8 mph, while Bailey can run at 6 mph. If they start at the same time and run towards a finish line 24 miles away, how long will it take for Alex to catch up with Bailey?
6. A shipping company charges \$10 per package plus a \$50 handling fee. If the total cost for shipping x packages is \$350, how many packages were shipped?
7. A bakery sells cakes for \$30 each and cupcakes for \$2 each. If they sell a total of 50 items in a day and make \$1000 in revenue, how many cakes and cupcakes did they sell?
8. Natalie is saving for a vacation. She puts \$1000 in a savings account with a 4% annual interest rate and \$1500 in another account with a 6% annual interest rate. If she earns \$92 in interest after a year, how much did she put in each account?
9. Ethan is investing in stocks. He invests \$6000 in Company A, which has an annual return rate of 7%, and \$4000 in Company B, which has an annual return rate of 9%. If his total annual return is \$480, how much did he invest in each company?
10. A company manufactures and sells bicycles. The total cost to produce x bicycles is given by the equation $C(x)=2000+50x$, where x is the number of bicycles produced. If each bicycle sells for \$150, how many bicycles must the company sell to make a profit of \$10,000?