Name _____

Linear Equation Word Problems

1. Sarah owns a shipping company. She charges a flat fee of $20 plus $5 per kilometer for deliveries. If she wants to make at least $150 on a delivery, how far must the delivery be?
2. A café owner wants to create a special blend of coffee. She mixes Brazilian beans costing $8 per pound with Ethiopian beans costing $12 per pound to get a blend costing $10 per pound. How many pounds of each should she use in a 50-pound blend?
3. Tom wants to plant a rectangular garden with a length 5 meters longer than its width. If he has 60 square meters of land, what are the dimensions of the garden?
4. Maria invests $5000 in a savings account that earns 3% annual interest. She also deposits $100 each month. How many years will it take for her total savings to reach $10,000?
5. The distance between City A and City B is 300 miles. A train leaves City A toward City B at 60 mph, while another train leaves City B toward City A at 40 mph. How long will it take for the trains to meet?
6. Maya is choosing between two phone plans. Plan A offers unlimited calls for $30 per month plus $0.05 per minute, while Plan B offers unlimited calls for $50 per month with no additional charge. For how many minutes of calls per month is Plan A cheaper than Plan B?
7. A company produces chairs. It costs $20 to produce each chair plus a one-time setup fee of $500. If they sell each chair for $50, how many chairs must they sell to make a profit of $2000?
8. Sam wants to increase his daily step count. He currently averages 5000 steps per day but aims to reach 10,000 steps per day within 6 weeks by increasing his daily steps linearly. How many steps should he increase per week?
9. A family installs a new showerhead that reduces water flow from 2.5 gallons per minute to 1.5 gallons per minute. If they typically shower for 15 minutes each, how much water do they save in a week?
10. A construction crew can build a wall in 8 hours working together. If one worker calls in sick, it takes them 12 hours to build the same wall. How many hours would it take for the sick worker to build the wall alone?

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