Problem-Solving Practice
Solve Equations with Variables on Each Side

Write and solve an equation to solve each exercise.

1. **PLUMBING** A1 Plumbing Service charges $35 per hour plus a $25 travel charge for a service call. Good Guys Plumbing Repair charges $40 per hour for a service call with no travel charge. How long must a service call be for the two companies to charge the same amount?

2. **EXERCISE** Mike’s Fitness Center charges $30 per month for a membership. All-Day Fitness Club charges $22 per month plus an $80 initiation fee for a membership. After how many months will the total amount paid to the two fitness clubs be the same?

3. **SHIPPING** The Lone Star Shipping Company charges $14 plus $2 a pound to ship an overnight package. Discount Shipping Company charges $20 plus $1.50 a pound to ship an overnight package. For what weight is the charge the same for the two companies?

4. **MONEY** Deanna and Lise are playing games at the arcade. Deanna started with $15, and the machine she is playing costs $0.75 per game. Lise started with $13, and her machine costs $0.50 per game. After how many games will the two girls have the same amount of money remaining?

5. **MONEY** The Wayside Hotel charges its guests $1 plus $0.80 per minute for long distance calls. Across the street, the Blue Sky Hotel charges its guests $2 plus $0.75 per minute for long distance calls. Find the length of a call for which the two hotels charge the same amount.

6. **COLLEGE** Duke is a part-time student at Horizon Community College. He currently has 22 credits, and he plans to take 6 credits per semester until he is finished. Duke’s friend Kila is also a student at the college. She has 4 credits and plans to take 12 credits per semester. After how many semesters will Duke and Kila have the same number of credits?