

Name

Section

Date

Multi-Steps Equations

1 Solve the equation.

$$-17 - 5(x + 30) = 3x$$

2. Look at each equation and possible solution. Is the solution correct? Select Yes or No for each equation.

- | | | |
|-------------------------------------|-----|----|
| A. $3 - m = -2(m + 6)$
$m = -15$ | Yes | No |
| B. $5(p + 3) = -35$
$p = -4$ | Yes | No |
| C. $8q = 3(10 + q)$
$q = 6$ | Yes | No |

3. Community Gym charges a \$50 membership fee and a \$55 monthly fee. Workout Gym charges a \$200 membership fee and a \$45 monthly fee. After how many months will the total amount of money paid to both gyms be the same? What will the amount be?

4. You are paid 1.2 times your normal hourly rate for each hour you work over 40 hours in a week. You work 46 hours this week and earn \$462.56. What is your normal hourly rate?

5. Your friend first multiplies each side of $\frac{1}{2}(x - 9) = \frac{3}{4}(5x + 1)$ by 4 when solving the equation. Why might your friend do this?

6. A boat travels upstream the Missouri River for 3.5 hours. The return trip takes only 2.5 hours because the boat travels 2 miles per hour faster downstream due to the current. How far does the boat travel downstream?

7. One month, Ruby worked 6 hours more than Isaac, and Svetlana worked 4 times as many hours as Ruby. Together they worked 126 hours. Find the number of hours each person worked.