

Many times, making a plan to solve problems begins with translating words from a mathematical sentence into an algebraic expression or formula. Steps to solve word problems include the following:

- Step 1: Identify the unknown amount(s); assign a variable.
- Step 2: Label the other quantities in the terms of x .
- Step 3: Write an equation.
- Step 4: Solve for the unknown.
- Step 5: Check your answer.

Select the best answer for the following questions and type it on the line provided.

1. During Math class, Lauren did a certain number of multiplication problems in one minute. Ian did 6 more than Lauren. The total number of multiplication problems that both students completed was 70. Which equation could be used to find the number of multiplication problems Lauren completed? _____
 - a. $L + 6 = 70$
 - b. $L + 6L = 70$
 - c. $L + \frac{1}{6}L = 70$
 - d. $L + (L + 6) = 70$
2. The Brown family is going to see a movie at the Cineplex. They must purchase 3 adult tickets and 2 children's tickets. Children's tickets cost \$3.00 less than adult tickets. If the total cost of the tickets for the Brown family is \$34, what is the cost of a children's ticket? _____
 - a. \$6.00
 - b. \$4.00
 - c. \$5.00
 - d. \$8.00
3. The Auto Mart did an analysis of their used car sales for 2006 and 2007. The analysis shows that the average cost of a used car in 2007 increased by 6.5% over the cost in 2006. Which expression shows the increase in the average price of a used car from 2006 to 2007? (Let c = the cost of a used car in 2006)

 - a. $c + 6.5 + c$
 - b. $c + 6.5c$
 - c. $c + .065c$
 - d. $c + .065 + c$

4. The number of union employees at Global Corporation is 10 more than three times the number of non-union employees. If the total number of employees at Global Corp. is 250, how many union and non-union employees work at Global Corp? _____
- a. 200 union 50 non-union
 - b. 190 union 60 non-union
 - c. 150 union 100 non-union
 - d. 140 union 110 non-union
5. Nine times a number, divided by three, equals two times that number. Which of the following equations could be used to find the number? _____
- a. $9x + 2x = 3$
 - b. $9\left(\frac{x}{3}\right) = 2x$
 - c. $\frac{9x}{3} = 2x$
 - d. $\frac{9}{3}(x) = 2$
6. The number of boys signed up for a gymnastics class is 16 fewer than twice the number of girls signed up for the class. If 50 children are signed up for the gymnastics class, how many boys and how many girls are signed up? _____
- a. 15 boys, 35 girls
 - b. 28 boys, 22 girls
 - c. 20 boys, 30 girls
 - d. 22 boys, 28 girls