Titan Learning Center  
Mathematics ACT Prep  
Set B-Week 2

Solve each problem, circling the correct answers. Remember that figures are not necessarily drawn to scale.

1. Which of the following mathematical expressions is equivalent to the verbal expression “A number, \( x \), squared is 39 more than the product of 10 and \( x \)”?
   
   F. \( 2x = 39 + 10x \)
   
   G. \( 2x = 39x + 10x \)
   
   H. \( x^2 = 39 - 10x \)
   
   J. \( x^2 = 39 + x^{10} \)
   
   K. \( x^2 = 39 + 10x \)

2. If \( 9(x - 9) = -11 \), then \( x = ? \)
   
   A. \( \frac{-92}{9} \)
   
   B. \( \frac{-20}{9} \)
   
   C. \( \frac{-11}{9} \)
   
   D. \( \frac{-2}{9} \)
   
   E. \( \frac{70}{9} \)

3. Discount tickets to a basketball tournament sell for $4.00 each. Enrico spent $60.00 on discount tickets, $37.50 less than if he had bought the tickets at the regular price. What was the regular ticket price?
   
   F. $2.50
   
   G. $6.40
   
   H. $6.50
   
   J. $7.50
   
   K. $11.00
4. The expression \((3x - 4y^2)(3x + 4y^2)\) is equivalent to:

A. \(9x^2 - 16y^4\)
B. \(9x^2 - 8y^4\)
C. \(9x^2 + 16y^4\)
D. \(6x^2 - 16y^4\)
E. \(6x^2 - 8y^4\)

5. A rectangle has an area of 32 square feet and a perimeter of 24 feet. What is the shortest of the side lengths, in feet, of the rectangle?

F. 1
G. 2
H. 3
J. 4
K. 8