1. How many gallons of a 5% acid solution must be mixed with 28 gallons of a 10% solution to obtain a mixture that is 7% acid?
   a. 143.5 gallons
   b. 140.0 gallons
   c. 39.66667 gallons
   d. 98.0 gallons
   e. 42.0 gallons

2. If you invest $4000 in a stock, you obtain a $500 dividend in one year. How much would you need to invest to earn a $200 dividend?
   a. $1600.0
   b. $160.0
   c. $100.0
   d. $2500.0
   e. $10000.0

3. The length of a rectangle is 3 feet more than the width. The area of the rectangle is 10 square feet. Find the length of the rectangle.
   a. 10
   b. \dfrac{10}{3}
   c. 2
   d. 5
   e. 3

4. The ABC company has determined that its cost of producing 60 units is $8000, and that the cost of producing 40 units is $1000. Express the linear relationship between the cost $C$ and the number of units $x$.
   a. $C(x) = 2.857143 \times 10^{-2}x + 7999.829$
   b. $C(x) = 3500x - 29000$
c. \( C(x) = 350x - 13000 \)
d. \( C(x) = 29000 - 3500x \)
e. \( C(x) = 3500x - 20000 \)

5 Write the formula that expresses the following variation: "\( y \) is directly proportional to \( x \) and \( y = 4 \) when \( x = -7 \)"

a. \( y = 4x \)
b. \( y = -\frac{4}{7}x \)
c. \( x = -7y \)
d. \( y = -\frac{7}{4}x \)
e. \( y = -28x \)