1. Using the formula for the area of a rectangle \( A = lw \), find the area of a rectangle if the length is 3 feet and the width is 2 feet. 
(Show work and write your answer with an appropriate unit.)

2. Using the formula for the area of a circle \( A = \pi r^2 \), determine the area of a circle whose radius is 5 inches. Use \( \pi = 3.14 \). (Show work and write your answer with an appropriate unit.)

3. \( F = \frac{9}{5} C + 32 \) is the equation for converting a Celsius temperature of \( C^\circ \) into Fahrenheit temperature of \( F^\circ \). Using this formula determine the Fahrenheit temperature that corresponds to 35 degrees Celsius. (Show work and write your answer with an appropriate unit.)

4. \( C = \frac{250x}{100-x} \) is an equation for determining the cost, \( C \), in millions of dollars, to remove \( x \) percent of the pollutants that are discharged into a river. Using this formula determine the cost to remove 40 \( \% \) of the pollutants. (Show work and write your answer with an appropriate unit.)

5. \( D = 0.0875x^2 - 0.4x + 66.6 \) is an equation for the stopping distance, \( D \), in feet, on dry pavement for a car travelling at \( x \) miles per hour. Using this formula determine the stopping distance for a car travelling at a speed of 30 miles per hour. (Show work and write your answer with an appropriate unit.)
Answers

1. 6 square feet
2. 78.5 square inches
3. 95 degrees Fahrenheit
4. 166.7 million dollars
5. 133.35 feet