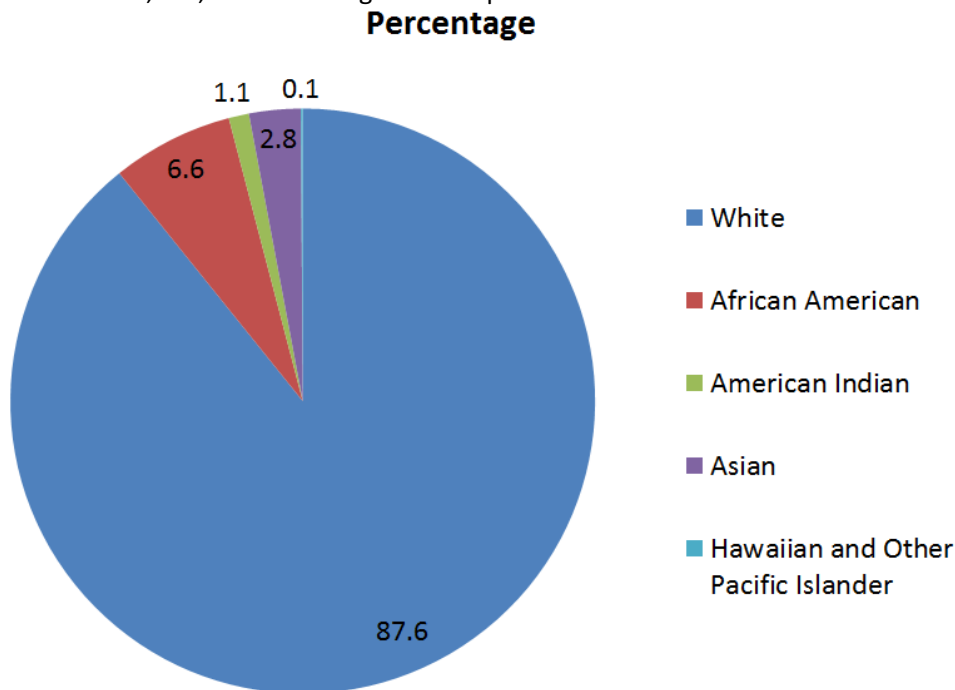


Please show all your work to ensure full credit.

1. Joe can make 28 pizzas in a three hour shift. At this rate, how long would it take him to make 60 pizzas?

2. What is the number of American Indians in Wisconsin as reported by Census data below? The total population of Wisconsin is 5,771,337 according to this report.



3. The energy intensity of sunlight I varies inversely with the square of the distance d from the sun. On earth which is $1.5 \cdot 10^{11}$ meters from the sun, the light intensity is $1300 \frac{W}{m^2}$. (This means that on a piece of ground one meter by one meter, the solar energy comes in at about the same rate as the heat a hair dryer gives off.) Write an equation that expresses this inverse relation between I and d . Also estimate to the nearest tens, the solar energy intensity at Mars which is $2.3 \cdot 10^{11}m$ from the sun.

4. Solve the following equations. If there are extraneous solutions, so state.

a. $2x^2 + x - 6 = 0$

b. $(3x - 1)(4 - x) = 6$

c. $3x^2 - 2x + 4 = 0$

d. $2x^2 - 10x + 15 = 0$

e. $\sqrt{2x - 1} = 5$

f. $\sqrt[3]{2 + 3x} = -1$

g. $\sqrt{x} + 1 = \sqrt{x + 7}$