Unit 2.1 Unit Conversion

- 1. Convert the following units from the word problems below
 - a. Convert 84 miles per hour to meters per second

b. Convert 54 miles per hour to kilometers to hour

c. If you have the density of Iron as 7.86 g/cm^3 , what would be the density in kg/m³

d. An average persons heart beats 60 times per minute. If the average person lives to be 86, how many times does it beat in a lifetime on average.

e. Blood sugar levels are measured in milligrams of glucose per decilitre (0.1 L) of blood volume. If the measured value was 128 mg/dL, what is that value in lbs/gallon

f. The 2023 Toyota Tacoma TRD model is a available with a 3.5 L V6 engine. How large is that in cubic inches? (1 L = 1000 cm^3)

g. A diesel generator produces 210 hp for 2 hours. If the brake-specific fuel consumption (BSFC) of the generator is 7000 BTU/ hp-hour, how many BTU's do we need?

In an automotive safety test, the 2021 Subaru Outback was found to decelerate from 60 mph to 0 mph over a distance of 44 yards. How many inches is that distance? (1 yard = 3 ft)