

Name: _____

Date: _____

[20 pt] 1. Perform each of the following multi-unit conversions. ALL answers should contain the proper number of Significant Figures and the proper Units. Show work to receive full credit.

(a) The speed of light is 3.8×10^8 m/sec. Convert this to miles/hour. 1(a) _____

(b) A new car in Europe is reported to get 1500 km/L of gas.
Convert this to miles/gallon. 1(b) _____

(c) The density of water is 1.0 g/mL at room temperature.
What is the density of water in lbs/gallon? 1(c) _____

(d) 2.00 in.^2 to cm^2 1(d) _____

(e) Convert 250 m^3 to ft^3 1(e) _____

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[20 pt] 2. Perform each of the following complex conversions. ALL answers should contain the proper number of Significant Figures and the proper Units. Show work to receive full credit.

(a) Water travels down a pipe at 2.0 L/minute, what is the flow in gallons/sec? 2(a) _____

(b) Calculate the number of milliliters of water in 2.0 cubic feet of water. 2(b) _____

(c) A space probe traveling at 27,000 mi/hr. is traveling at what speed in km/sec? 2(c) _____

(d) Given the following conversion how many flarps are in 12 fleep?
(2.4 flarps = 2 glugs, 9 pluns = 27 migs, 24 glugs = 1 mig, and 2 pluns = 17 fleeps. 2(d) _____

(e) A stove provides 250 J/sec of heat, what is the amount of heat provided in cal/hour? 2(e) _____