Lesson 2 Assignment Sheet

Name:

Your assignment is to obtain costs of various forms of energy from your local utilities and energy providers. When you know those costs we can do an energy analysis to determine what form of energy is the best to use for heating systems in your area. HVAC/R technicians are definitely a part of the energy business!

Use this sheet to enter those costs and calculate your local energy costs.

Electrical: Cost per Kilowatt Hour _____÷3.415 = _____

Natural Gas: Cost per Therm (100,000 btu) _____÷ 100 = _____

Natural Gas: Cost per cubic foot _____X 1 = _____

Propane (LPG): Cost per gallon delivered _____÷92.25 = _____

Propane (LPG): Cost per gallon at filling station _____÷92.25 = _____

Oil (#1 Grade Oil): Cost per gallon delivered _____÷136 = _____

Oil (#2 Grade Oil): Cost per gallon delivered _____÷140 = _____

***Coal :** Cost per ton delivered _____÷24000= _____

***Wood:** Cost per cord delivered _____÷20000= _____

Your calculated answer for each type of fuel above indicates the cost of **1000 BTUs** of heat energy.

To complete the analysis you would take one of the answers above times the combustion efficiency of the system being used.

An example:
#2 fuel oil @ $1.20 per gallon÷ 140,000 btus per gallon = $.009 per 1000 btus
#2 fuel oil @ .009 X 1.25 (factor for 80% efficiency) = $.01125 per 1000btus

Note: To find efficiency factor find the reciprocal of the combustion efficiency percentage (the reciprocal button is usually shown as 1/x on your calculator).