**Unit 4 – Thermo: Quiz 1c**

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1. 3.2 tons of coal is used to provide enough heat to ***raise*** the temperature of 2.0 x 105 gallons of water up 17 oC. The heat value of one ton of coal is 2.5 x 107 BTU/ton. One gallon of water weighs 8.345 lbs and BTU’s are calculated by multiplying pounds of water by their ***change*** in temperature in degrees Celsius. *1 BTU (British Thermal Unit) = 1055 J.*
	1. What is the input energy in kilojoules?
	2. What is the useful energy in kilojoules?
	3. What is the efficiency?

Answers:

1. 3.2 tons of coal is used to provide enough heat to ***raise*** the temperature of 2.0 x 105 gallons of water up 17 oC. The heat value of one ton of coal is 2.5 x 107 BTU/ton. One gallon of water weighs 8.345 lbs and BTU’s are calculated by multiplying pounds of water by their ***change*** in temperature in degrees Celsius. *1 BTU (British Thermal Unit) = 1055 J.*
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* 1. What is the useful energy in kilojoules?

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* 1. What is the efficiency?

