

# Question 1

A particular coal burning process converts chemical energy to electric energy with an efficiency of 0.20 (20%). Suppose that 1000 J of electric energy is required.

How much chemical energy is needed by the coal burning process to provide 1000 J of electric energy?

1. 200 J
2. 500 J
3. 1000 J
4. 2000 J
5. 5000 J

Phys 100: F23 Class 22

## Question 2

Various electric motors produce energy over various intervals as listed below.

<b>Instant</b>	<b>Energy</b>	<b>Time</b>
Motor A	300 J	30 s
Motor B	500 J	50 s
Motor C	500 J	25 s

Which of the following best represents the ranking of the powers produced?

1. A larger, B and C equal.
2. B and C equal, A smaller.
3. C largest, B middle, A smallest.
4. A and B equal, C smaller.
5. C larger, A and B equal.