Power = potential difference x Current

- P = Power (W)
- V = Voltage (V)
- I = Current (A)

1. A light bulb is connected to a 2V supply and experiences a current of 6.4A. What is the power rating of the bulb?

2. A kettle has a power rating of 1500w. What is the potential difference that it must be supplied with to have a current flowing through it of 30A?

3. A student attaches a 10V supply to a bulb with a power rating of 100w. What is the current running through the bulb?

4. The student now connect a 25w bulb to the same supply. What is the difference between the current going through this bulb compared to the 100w bulb?

5. **Bulb A transfers 1000J in 10seconds. Bulb B transfers 1500J in 3 seconds. Which bulb will have a higher current running through it when connected to a 12V supply? (You need to use: Power = Energy x Time for this question to work out the Power. Then use P=VxI but you might need to rearrange it!)** ***Just put A or B in the answer box.***