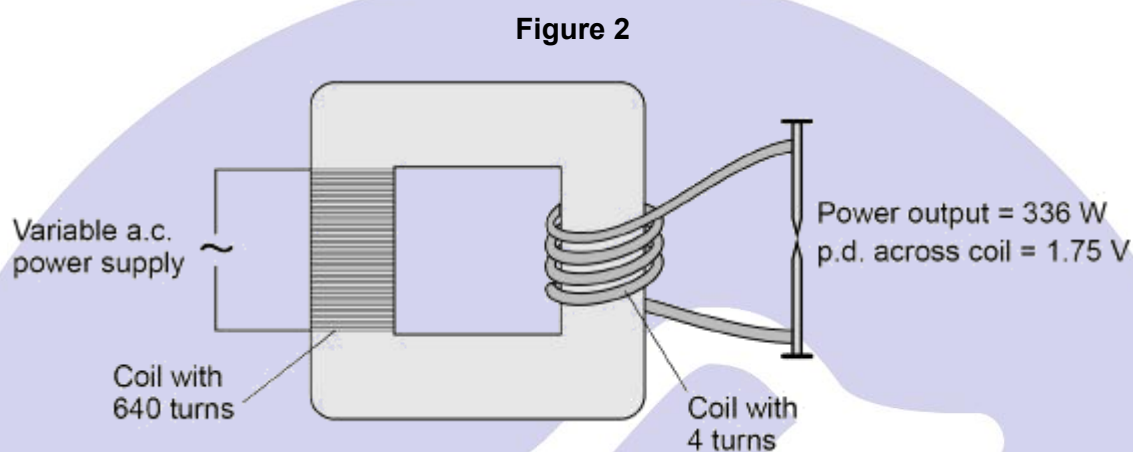


Q1.

A spot-welder is a device that uses a transformer to produce a large current to join sheets of metal together.

Figure 2 shows a transformer demonstrating how a large current can heat and join two nails together.



Calculate the current from the power supply needed to provide a power output of 336 W.

Use the data in **Figure 2**.

The transformer is 100% efficient.

Current = _____ A

(5)

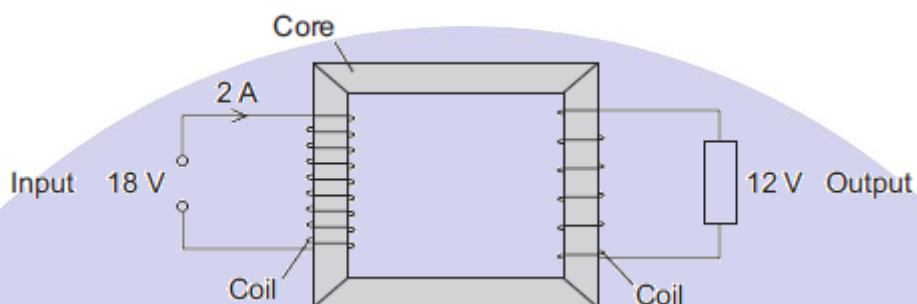
(Total 5 marks)

Q2.

The current in a circuit depends on the potential difference (p.d.) provided by the cells and the total resistance of the circuit.

Figure 2 shows a transformer.

Figure 2



- (ii) The transformer is 100% efficient.

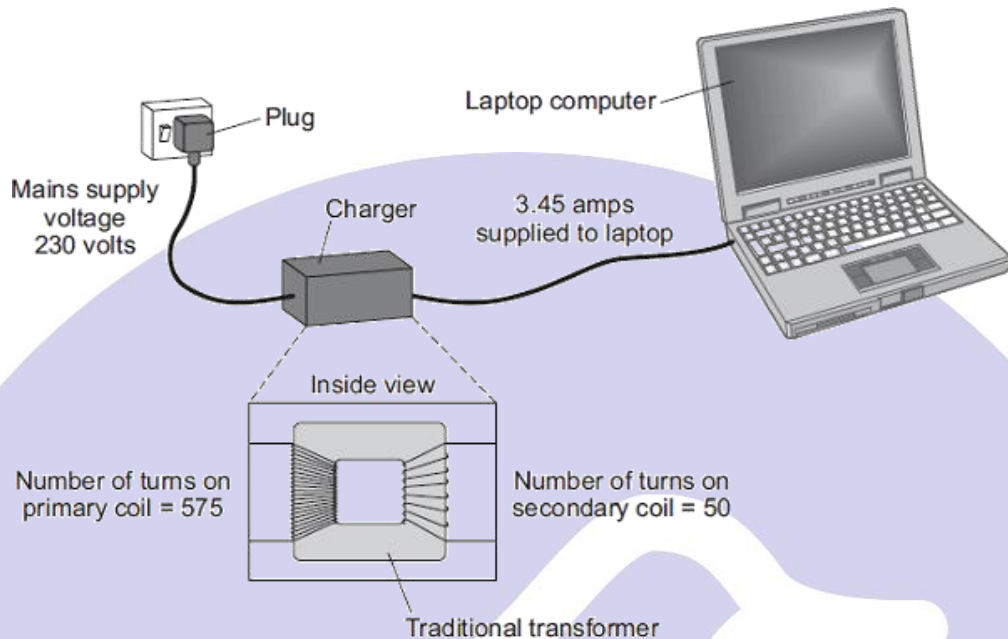
Calculate the output current for the transformer shown in **Figure 2**.

Output current = _____ A

(2)
(Total 2 marks)

Q3.

Batteries inside laptop computers are charged using laptop chargers. The laptop charger contains a traditional transformer.



- (b) (i) Use information from the diagram to calculate the potential difference the charger supplies to the laptop.

Potential difference = _____ V

(2)

- (ii) Calculate the current in the primary coil of the transformer when the laptop is being charged.

Assume the transformer is 100% efficient.

Current = _____ A

(2)

(Total 4 marks)