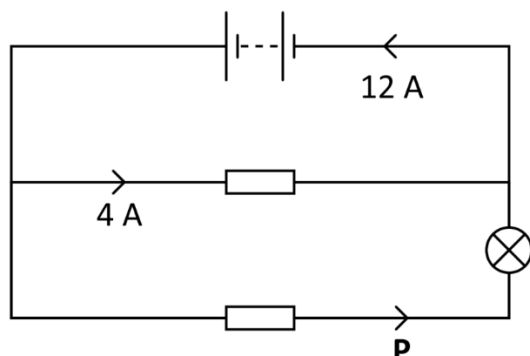


Name:

Class:



Look at the circuit diagram.

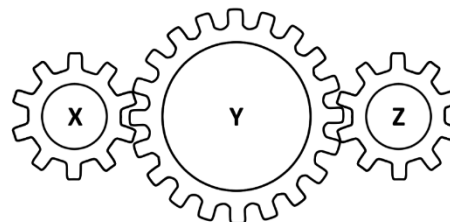


What is the current at point P in the circuit?

- A 2.5 A
- B 5.0 A
- C 8.0 A
- D 10.0 A

A student investigates cogs and gears.

Cogs X and Z have 10 teeth. Cog Y has 20 teeth.

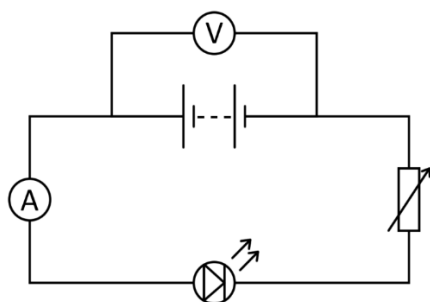


Cog X is turned 5 times.

How many times does cog Z turn?

- A 5 times
- B 10 times
- C 20 times
- D 50 times

A student builds a circuit to investigate how the current through an LED and the potential difference across it vary when the LED lights up. Look at the circuit diagram.



i. The student has made **two** errors connecting the circuit. Identify the errors.

.....

.....

.....

.....

ii. The student then connects the circuit correctly. She measures the current through the LED as 0.03 A when the potential difference across it is 3.0 V.

Calculate the resistance of the LED.

.....

.....

Resistance = ... unit = ...

iii. Calculate the charge which flows when this LED operates for 2.5 minutes.

.....

.....

.....

Charge = ... unit = ...