

Electric Circuits

Bands 1, 2, 3, 4, 5 · 10 questions · Free sample

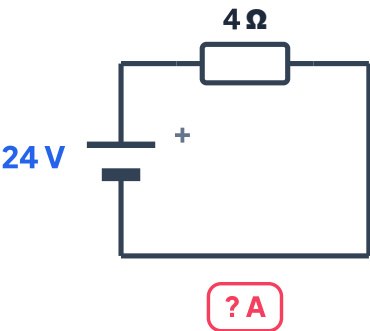
Name _____ Date _____ Score _____ /10

Each picture asks its own question. A bulb lights when current flows through it round a complete loop; a closed switch is a wire, an open one a gap. Amps = volts / ohms. Resistors in line add; side by side they share the voltage and the total is less than the smallest. Circle the letter of your answer.

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1 Band 1

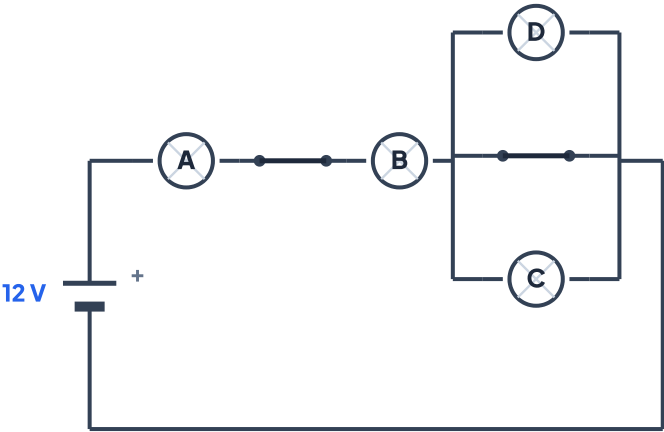
What current flows from the battery?



- ☐ A 6 A
- ☐ B 12 A
- ☐ C 20 A
- ☐ D 96 A

2 Band 1

How many bulbs are lit?

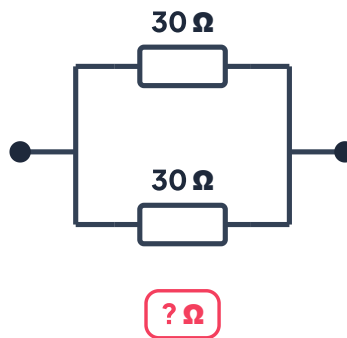


- ☐ A 1
- ☐ B 2
- ☐ C 3
- ☐ D 4

3

Band 2

What is the total resistance between the dots?



(A)

 $15\ \Omega$

(B)

 $30\ \Omega$

(C)

 $45\ \Omega$

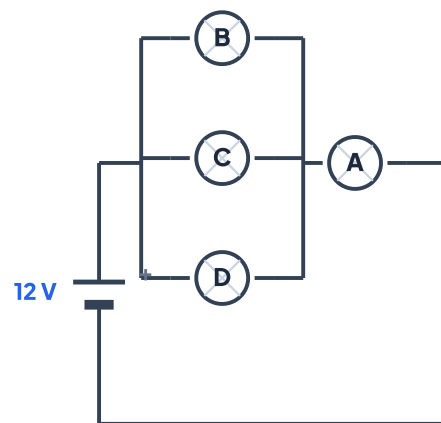
(D)

 $60\ \Omega$

4

Band 2

Which bulb is the brightest?



all the bulbs are identical

(A)

A

(B)

B

(C)

C

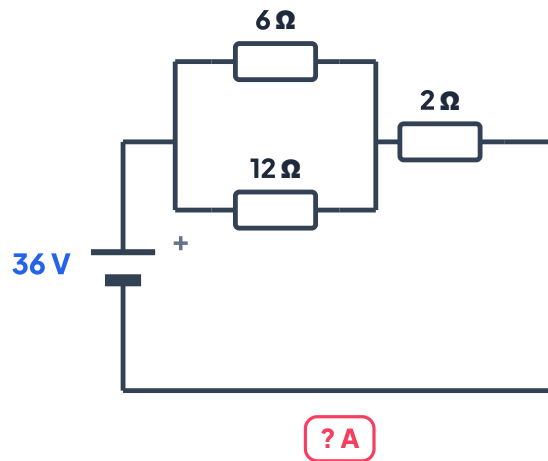
(D)

D

5

Band 3

What current flows from the battery?



(A)

3 A

(B)

6 A

(C)

20 A

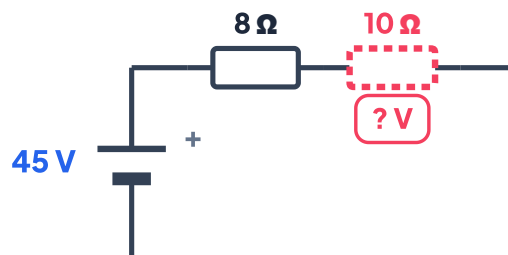
(D)

27 A

6

Band 3

What is the voltage across the marked part?



(A)

25 V

(B)

45 V

(C)

50 V

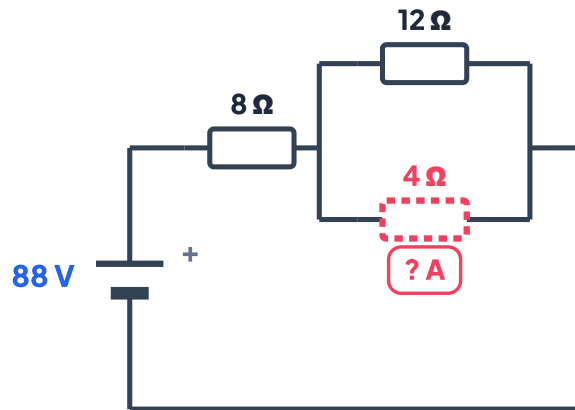
(D)

75 V

7

Band 4

What current flows through the marked resistor?



(A)

4 A

(B)

6 A

(C)

8 A

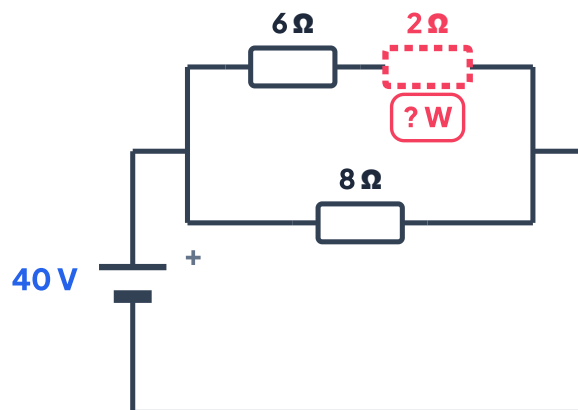
(D)

12 A

8

Band 4

How much power does the marked resistor use?



(A)

10 W

(B)

25 W

(C)

48 W

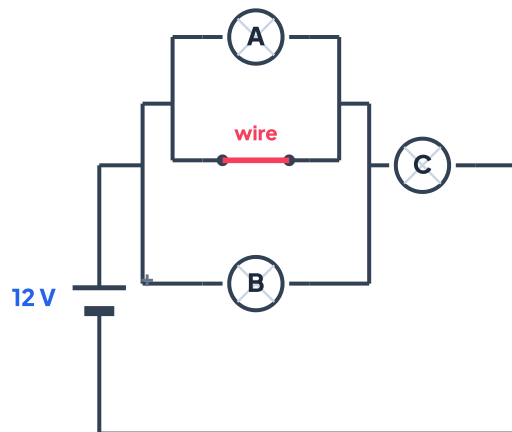
(D)

50 W

9

Band 5

A wire is put across bulb A. What happens to bulb A?



(A) Brighter

(B) Dimmer

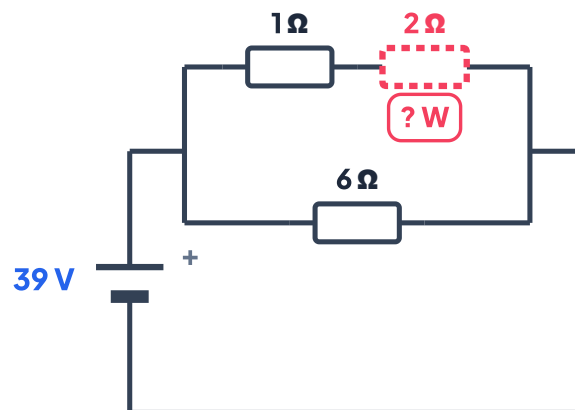
(C) Goes out

(D) Stays the same

10

Band 5

How much power does the marked resistor use?



(A) 338 W

(B) 507 W

(C) 676 W

(D) 1014 W

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