Lab Investigations

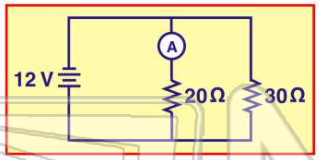
Phys Sci

Name _____ Class _____ Date _____

1 A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

What is the **equivalent resistance** of the circuit?

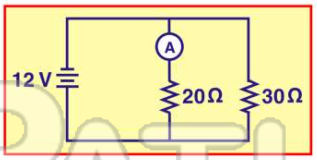
A 10 Ω
B 12 Ω
C 25 Ω
D 50 Ω



2 A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

What is the **current reading** of the ammeter?

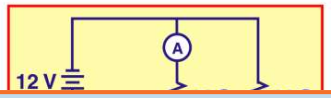
A 1.0 A
B 0.60 A
C 0.40 A
D 0.20 A



3 A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

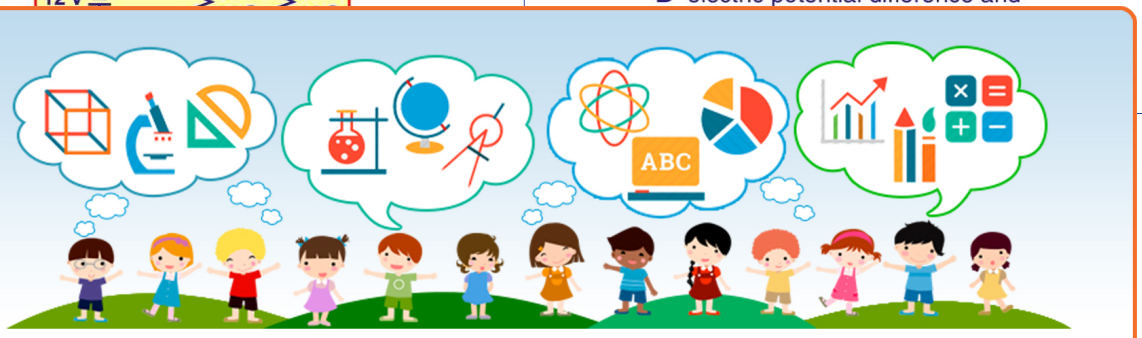
What is the **power** of the **30-ohm resistor**?

A 4.8 W
B 12 W
C 20 W
D



4 Which physical **quantity** is correctly paired with its **unit**?

A power and watt•seconds
B energy and newton•seconds
C electric current and amperes/coulomb
D electric potential difference and



PREVIEW

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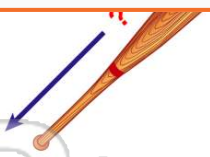
5

7

C momentum
D velocity

C 10^1 m
D 10^2 m



9 A **joule** is equivalent to a

A N•m
B N•s
C N/m
D N/s

10 The **weight** of a chicken egg is most nearly equal to

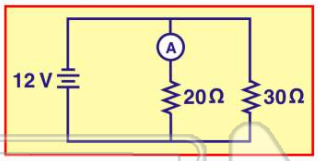
A 10^{-3} N
B 10^{-2} N
C 10^0 N
D 10^2 N

ANSWER KEY

A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

What is the **equivalent resistance** of the circuit?

A 10 Ω
B 12 Ω
C 25 Ω
D 50 Ω

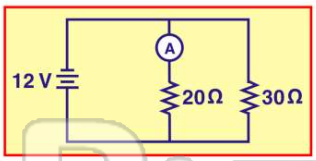


b

A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

What is the **current reading** of the ammeter?

A 1.0 A
B 0.60 A
C 0.40 A
D 0.20 A

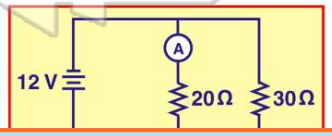


b

A **20-ohm resistor** and a **30-ohm resistor** are connected in parallel to a **12-volt** battery as shown. An ammeter is connected as shown.

What is the **power** of the **30-ohm resistor**?

A 4.8 W
B 12 W
C 30 W
D 75 W

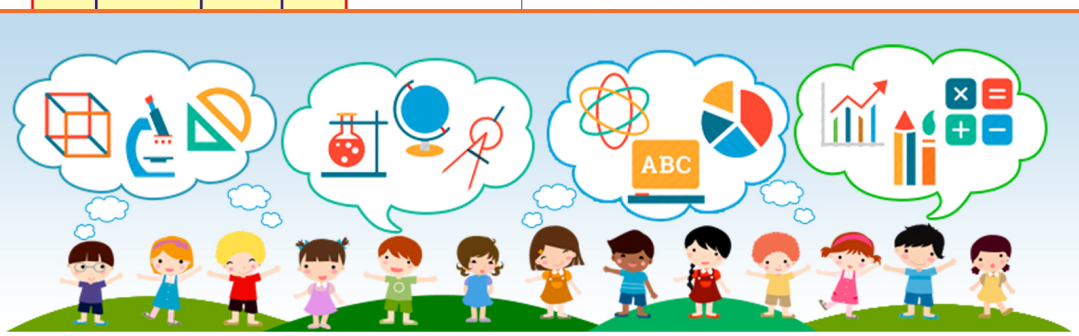


a

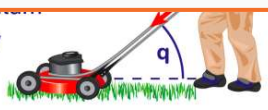
Which physical **quantity** is correctly paired with its **unit**?

A power and watt•seconds
B energy and newton•seconds
C electric current and amperes/coulomb
D electric potential difference and joules/coulomb

d



D velocity



D 10^2 m

A **joule** is equivalent to a

A N•m
B N•s
C N/m
D N/s

a

The **weight** of a chicken egg is most nearly equal to

A 10^{-3} N
B 10^{-2} N
C 10^0 N
D 10^2 N

c