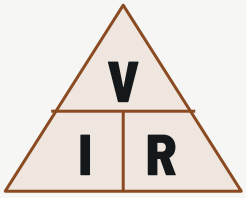
# OHM'S LAW

**THREE QUANTITIES. KNOW ANY TWO, AND YOU CAN FIND THE THIRD.**




Cover the one you want. A line across means divide, side by side means multiply.

## THE THREE FORMS

```
V = I × R     volts = amps × ohms
I = V ÷ R     amps  = volts ÷ ohms
R = V ÷ I     ohms  = volts ÷ amps
```

**Learn the formulas, not just the triangle**

There's no formula sheet in the exam. You can ask for blank paper, but it stays in the room. Write the three formulas out until you know them by heart.

## EXAMPLE 1: FIND THE CURRENT

Supply 230 V, heating element resistance 6 Ω

I = V ÷ R = 230 ÷ 6 = 38.33 A

## EXAMPLE 2: FIND THE RESISTANCE

Supply 230 V, current measured 12 A

R = V ÷ I = 230 ÷ 12 = 19.17 Ω

**Casio fx-85GT tip**

If 230 ÷ 6 comes up as a fraction (115/3), press the `S⇔D` button to switch it to a decimal. On other calculators, look for a FORMAT or decimal setting. Get used to *your own* calculator, because that's the one you'll take into the exam.

A 6 A lighting circuit doesn't mean the lights draw 6 A. They might only draw 2.5 A. The 6 A breaker is sized to **protect the cable**.

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