

CIE A-Level Physics

11 - Temperature

Flashcards

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What is thermal equilibrium?



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Heat can enter or leave a system through a boundary. Any two systems that are in contact with one another, with no flow of heat between them, must be in thermal equilibrium and thus have the same temperature.



How do you convert from Celsius to Kelvin?



How do you convert from Celsius to Kelvin?

Add 273.

Eg. 10 degrees C = 283 K



Why is the absolute scale used?



Why is the absolute scale used?

It doesn't arbitrarily depend on the properties of a given substance (eg. water's melting and boiling point for the Celsius scale).

0K (absolute zero) means that the particles have minimum internal energy.



Compare the relative advantages and disadvantages of thermistor.



Compare the relative advantages and disadvantages of thermistors.

Advantages: small, high sensitivity, cheap, quick response.

Disadvantages: non linear response, fragile, high resistance, can be loud.



Compare the relative advantages and disadvantages of thermocouple thermometers.



Compare the relative advantages and disadvantages of thermocouple thermometers.

Advantages: wide temperature range, quick response, cheap.

Disadvantages: hard to recalibrate.



In which direction is heat energy transferred?



In which direction is heat energy transferred?

From hot regions to cooler regions.

