



CZYTAMY PO ANGIELSKU **Zadanie D. Hewitta**

Which of these continually emits electromagnetic radiation?

- a) An un-lit flashlight bulb.
- b) A hot steam radiator.
- c) A tray of ice cubes.
- d) None do.
- e) All do.



Answer: e

All bodies with any temperature whatever continually emit electromagnetic radiation. The frequency of the emitted radiation varies with temperature. The rule is $\bar{f} \sim T$, where \bar{f} is the peak frequency of emitted radiation and T is the absolute temperature of the body emitting it. The bodies listed have relatively low temperatures so they emit relatively low frequencies – infrared. If you raise their temperatures sufficiently, their radiation will be visible light.



All bodies in nature, you, me, and all things, both emit and receive electromagnetic radiation continuously. When a body emits more than it receives, its temperature drops. When it receives more than it emits, its temperature increases. At any constant temperature a body emits as much as it receives. Nature is dynamic.

The Physics Teacher, Vol. 40, Nr 4, April 2002.

Dictionary:

un-lit flashlight bulb – niezapalona żarówka
continually – ciągle
steam radiator – kaloryfer na gorącą parę