

**26** The table shows the wavelengths of five electromagnetic waves.

Which row correctly identifies the principal radiation for each of these wavelengths?

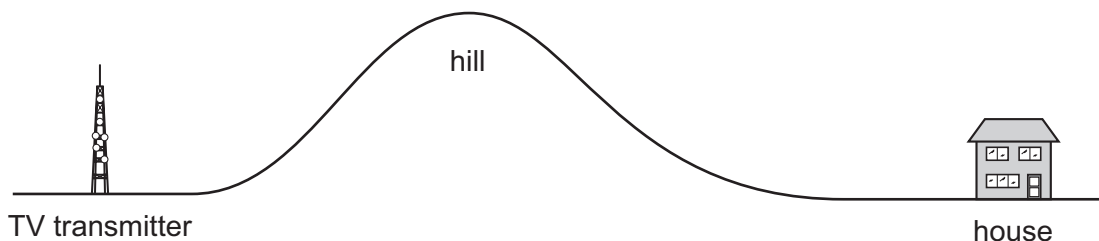
|          | $10^{-14}$ m | $10^{-10}$ m | $10^{-6}$ m | $10^{-2}$ m | $10^2$ m   |
|----------|--------------|--------------|-------------|-------------|------------|
| <b>A</b> | gamma-ray    | X-ray        | infrared    | microwave   | radio wave |
| <b>B</b> | radio wave   | microwave    | infrared    | X-ray       | gamma-ray  |
| <b>C</b> | radio wave   | microwave    | ultraviolet | infrared    | X-ray      |
| <b>D</b> | X-ray        | infrared     | ultraviolet | microwave   | radio wave |

**27** Two progressive waves meet at a point.

Which condition must be met for superposition of the waves to occur?

- A** The waves must be coherent.
- B** The waves must be of the same type.
- C** The waves must be travelling in opposite directions.
- D** The waves must meet in phase.

**28** A hill separates a television (TV) transmitter from a house. The transmitter cannot be seen from the house. However, the house has good TV reception.



By which wave effect at the hill could the TV signal reach the house?

- A** coherence
- B** diffraction
- C** interference
- D** reflection