

# Lightning

This task is about the relationship between thunder and lightning.



You can work out roughly how far away a thunderstorm is by counting the number of seconds between when you see the flash of lightning, and when you hear the sound of thunder. Then you divide the number of seconds by three to get the distance in kilometres.

a) i) Why do you see lightning before hearing the thunder?

- |   |   |  |   |
|---|---|--|---|
| <input type="radio"/> Light travels much faster than sound. | <input type="radio"/> Your senses will always detect light quicker. | <input type="radio"/> The sound waves are often muffled by the clouds. | <input type="radio"/> The lightning flash is very bright. |
|---|---|--|---|

Explain your answer.

ii) The time between the lightning and the thunder was 12 seconds.

How far away was the thunderstorm when this occurred?  kilometres

b) Tall buildings are often struck by lightning but they are protected by a rod called a lightning conductor.

This rod leads to the ground, so that when lightning strikes the electricity can pass through it, without causing any harm.

Lightning rods are most likely made out of:

- |                                 |                               |                              |                             |
|---------------------------------|-------------------------------|------------------------------|-----------------------------|
| <input type="radio"/> concrete. | <input type="radio"/> rubber. | <input type="radio"/> metal. | <input type="radio"/> wood. |
|---------------------------------|-------------------------------|------------------------------|-----------------------------|

Explain your answer.