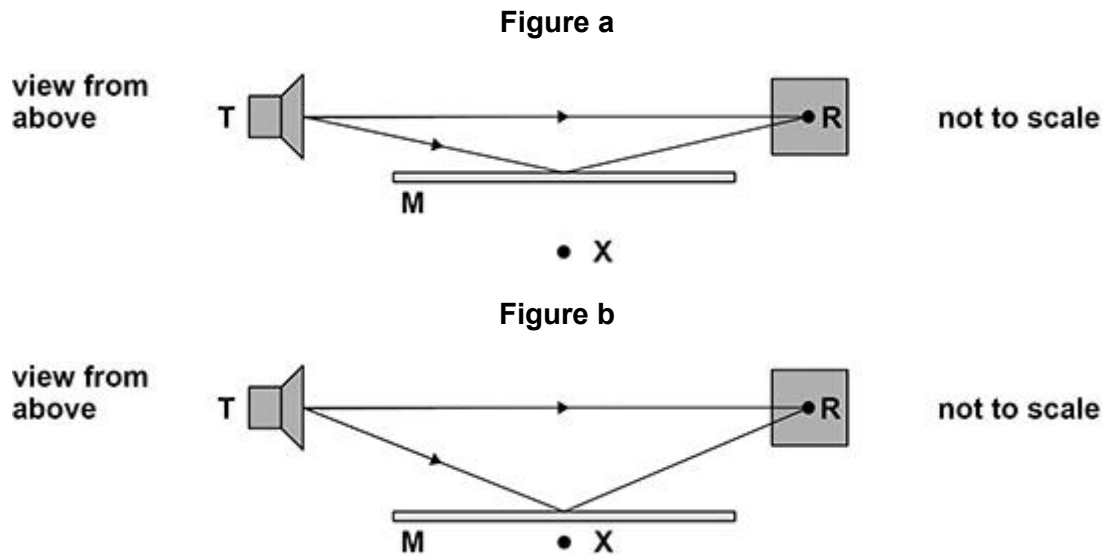


The figures **a** and **b** show **T** (Transmitter) and **R** (Receiver) and two different positions of a metal plate **M** that reflects microwaves. **M** is vertical and parallel to the direct transmission from **T** to **R**.



In an experiment, **T** and **R** are about two metres apart. **M** is moved slowly towards **X**. **Figure a** shows the initial position of **M**. **Figure b** shows **M** when it has been moved a few centimetres.

The arrowed lines show the path of waves that reach **R** directly and the path of waves that reach **R** by reflection from **M**.

Question: Explain what happens to the signal detected by **R** as **M** is moved slowly towards **X**.