**Summary:**

1000 variations. Similar triangles. Pythagoras.

**Question: 1000 Variations**

a) Δ LQP ~ Δ LMN. Find LM and MN.

<EFOFEX>
id:fxd{4a8445ea-e8c7-4cec-94ff-b5a9c30e09aa}
FXGP:DP-MT8UF9W
FXData:

</EFOFEX>

[4]

b) A mobile tower <EFOFEX>
id:fxe{1cbba560-6919-4531-9b5d-ad5635de1f23}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX> metres high has two parallel wires that join from the mast to the ground. The first, from the top if the mast, is <EFOFEX>
id:fxe{08405f26-1682-4ff2-9f4a-7faa9fbf7dfc}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX> m long and is fastened on the ground <EFOFEX>
id:fxe{55fa6f78-6b25-401d-8a10-b56f353ef2b9}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX> metres from the foot of the mast. The second is fastened on the ground <EFOFEX>
id:fxe{b1202c99-2f23-4dce-b94c-71726c912f4b}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX>m from the foot of the mast. Find the length of the second wire and how far up the mast it is fastened.

**Solution:**

a) <EFOFEX>
id:fxe{3f55563a-41bc-437f-b978-90532bdda479}
FXGP:DP-MT8UF9W
FXData:

</EFOFEX>

b)

<EFOFEX>
id:fxd{f4554b64-2c13-4dc2-97f1-74dd4c9e599a}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX>

<EFOFEX>
id:fxe{238c2669-415f-4a06-bb8c-5e8cb5bb043b}
FXGP:DP-V4NLRUQ
FXData:

</EFOFEX>