

a plane is \perp to every line drawn through its foot.

① If another line could be drawn at $A \perp MN$ pass a plane through $A \perp$ this line

⑩ Same as 3

⑫ This new plane would intersect MN in a straight line.

a straight line not in a given plane at 1 point.

⑬ The \perp AE would then be \perp to the line of intersection.

③ Same as 10

⑭ Impossible \therefore conclusion

⑭ At a given point in a straight line only \perp can be erected to that line.

Q.E.D.