

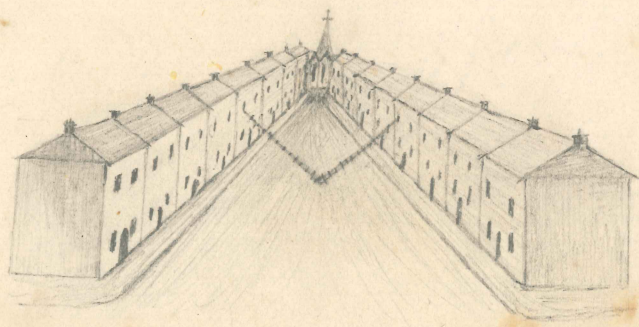
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At Matlock near the Peak in Derbyshire
where are many curiosities of nature, is a rock by
the side of the river Derwent, rising to a perpendi-
cular height, which being inaccessible, I undea-
voured to measure, and found by a mathematical
method that the distance between the place of ob-
servation and the foot of the rock was $55\frac{1}{2}$ ^{yds} and from
the top of the rock to the said place was $140\frac{1}{2}$ ^{yds} (nearly)
required the height of this stupendous work?



A Ladder ⁴⁰ long, may be so planted, that
it shall reach a window ⁴ 33 from the ground on
one side of the sheet, and, without moving it at
the foot, will do the same to a window ⁴ 24 high
on the other side; the breadth of the sheet is re-
quired.



There are three towers, A, B, and C,
standing in a direct line, the heights whereof
are 64, 90, 249, and 50 respectively. The distance
between the top of the tower A and that of B is
97^{ft}; and the distance between the bottom of
the tower B and that of C is 76^{ft}. By this
data it is required to find the distances
the tops and bottoms of the towers are from
each other?

