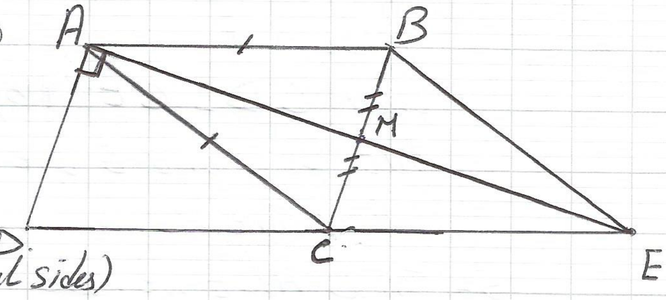
* 5th Exercise:

① 

2- In $\triangle ABC$ we have:
$AB = AC$ (given)
then, $\triangle ABC$ is isosceles.
of vertex A (having a pair of equal sides)
but M is midpt of [BC] (given).
then [AM) is a median relative to [BC].
Thus, (AM) is perp. to (BC) (Median issued from main vertex of an isosceles $\triangle$ is a height as well).

3- Consider quadrilateral ABEC:
M is midpt of [BC] (given)
E is symmetric of A w.r.t M (given)
then M is mid pt of [AE].
So, quad ABEC is a parallelogram (having its diagonals bisect each other at same mid pt).
But $AB = AC$ (given)
Therefore, parallelogram ABEC is a rhombus (having a pair of adjacent sides equal).

4- (AB) // (DC) (opposite sides of parm ABCD)
(AB) // (CE) (opposite sides of rhombus ABEC)
then, (DC) // (CE) (Two lines parallel to same line are parallel)
but C is a common point.
Thus, points D, C and E are collinear.