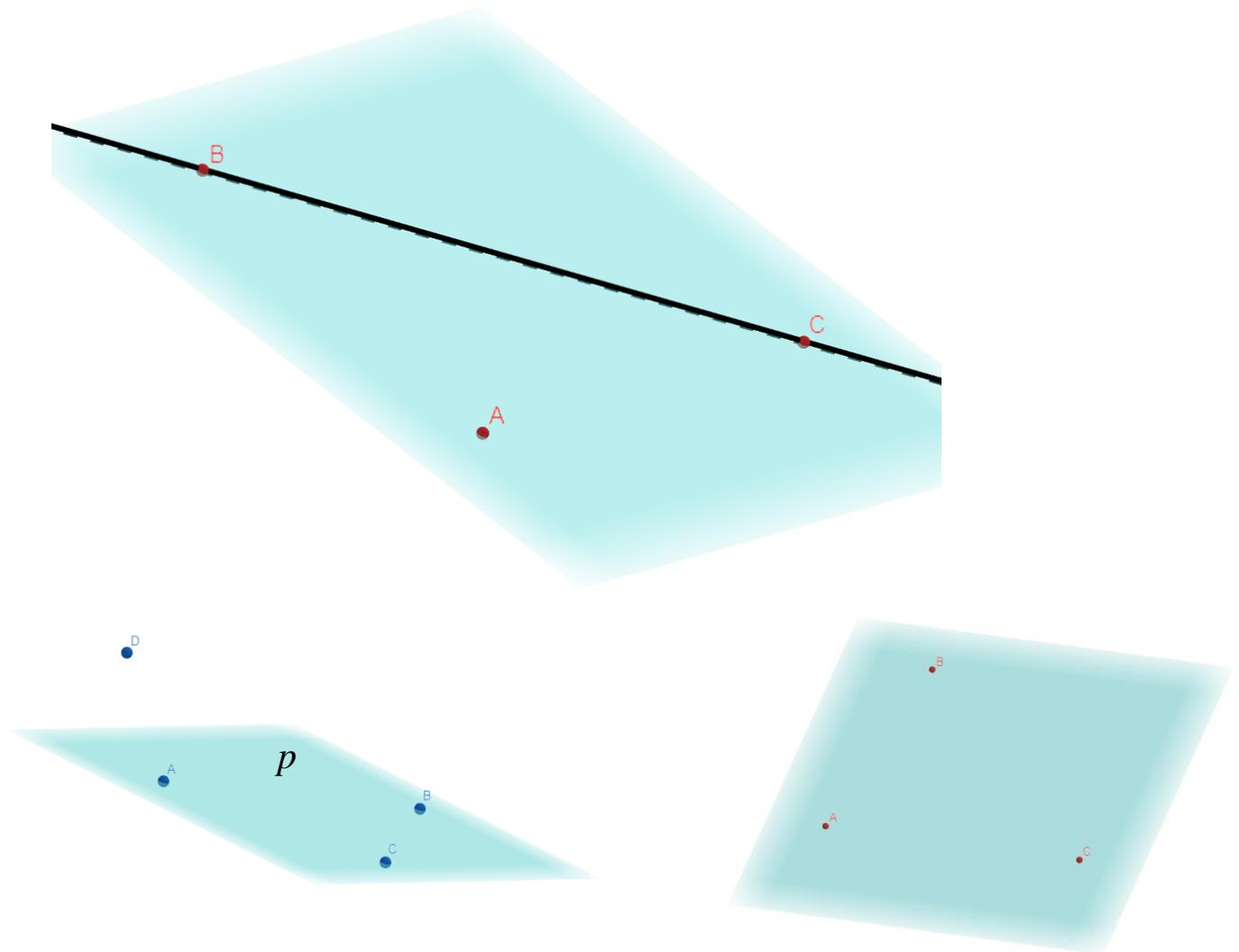


Math 4 e. Class work 24.

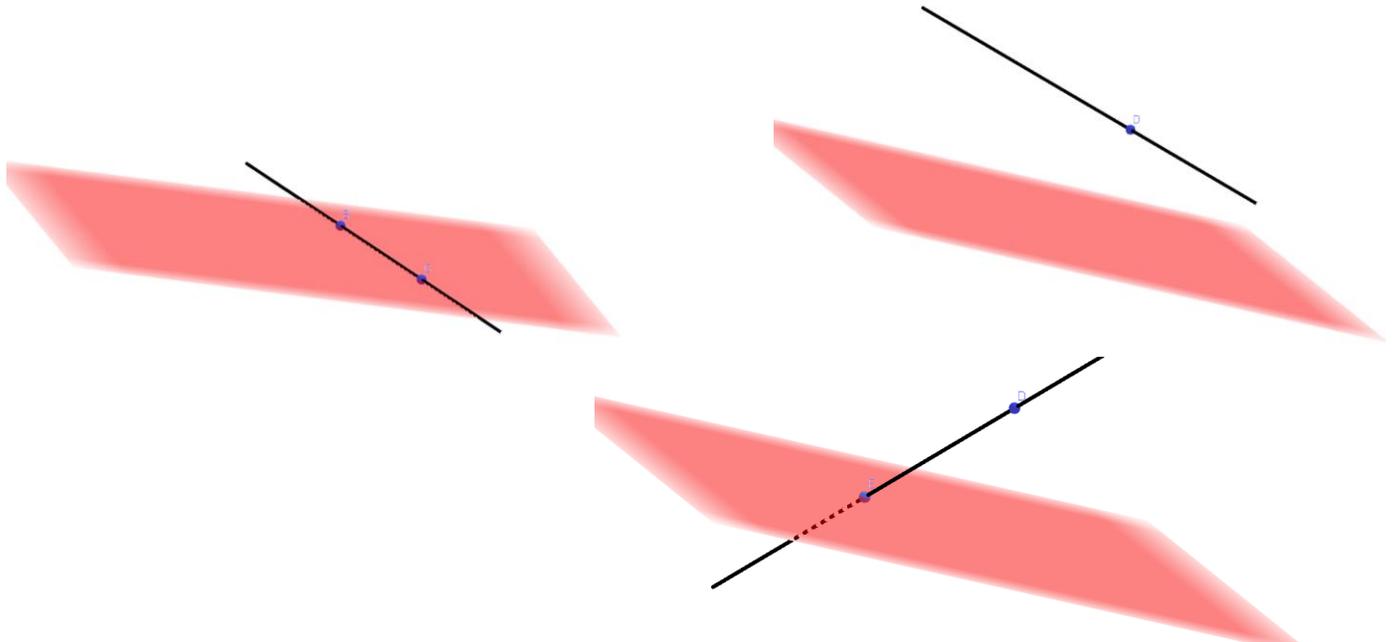
Through two points we can draw only one line, so it can be said that a line is defined by two points. A plane is defined by three points, so through any three points a plane can be drawn.

Point can belong to the line or not. Points A and B belong to the line  $m$ , point C does not.

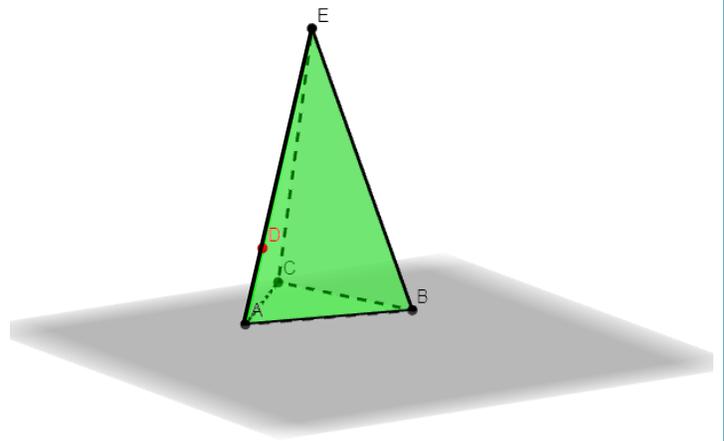
$$C \in m, B \in m, \quad A \notin m$$



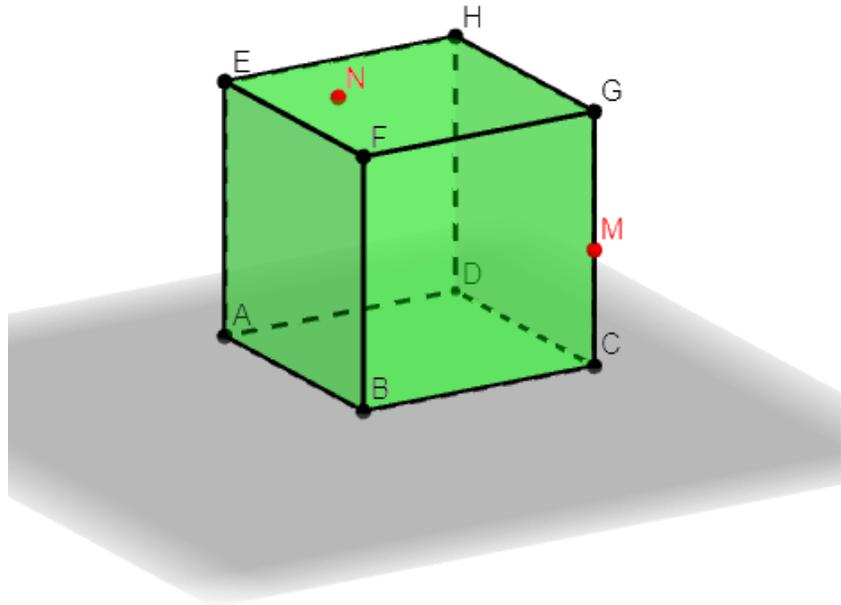
1. How many planes are there containing two given points?
2. Why a tripod has three legs?
3. Why a table, which has four legs is not always stable?
4. Which of the following statement is true:
  - a. If three points belong to the same line they also belong to the same plane.
  - b. If three points belong to the same plane, they also belong to the same line.
5. There is a line  $l$ . How many planes can contain that line  $l$ ?
6. What is the difference of the positions of line and plane on the pictures:



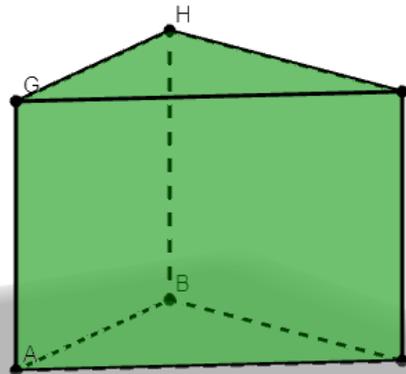
7. How many lines can be drawn through pairs of points  $A, B, C, D$  if they are on the same plane? If they are not on the same plane?
8. How many lines intersect a plane containing the face  $ACB$  of the pyramid? Does the point  $D$  belong to this plane? To which planes does point  $D$  belong to?



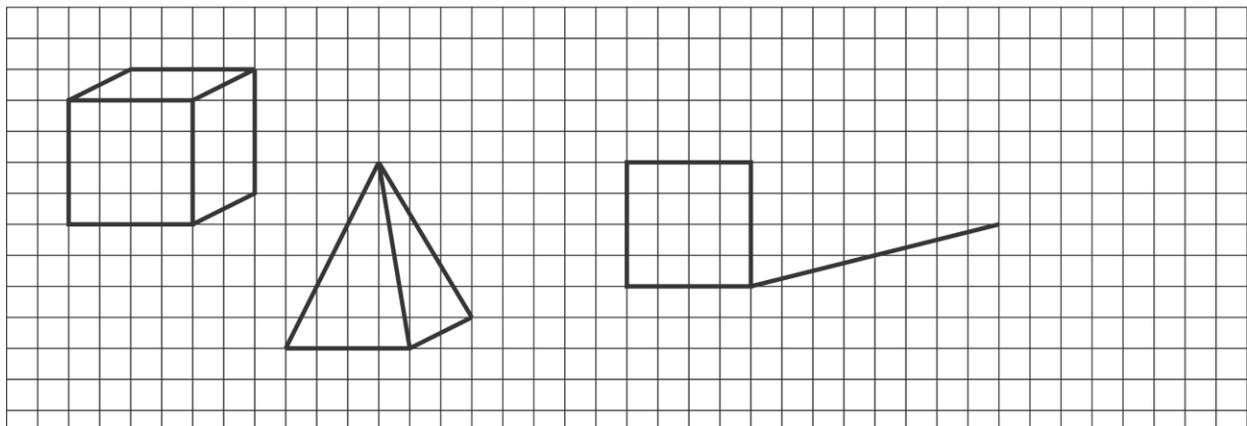
9. How many pairs of parallel planes defined by the vertices of a cube?



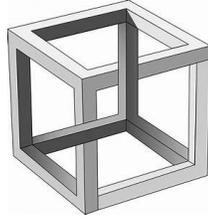
10. How you can describe a cube, a pyramid, a prism?



11. On the graph paper add missing segments, to get a cube a pyramid, a brick.



12. Can these things exist?



13. On the graph paper draw how this figure from above, from left and from front view.

