

Several mutants are isolated, all of which require compound G for growth. The compounds (A to E) in the biosynthetic pathway to G are known, but their order in the pathway is not known. Each compound is tested for its ability to support the growth of each mutant (1 to 5). In the following table, a plus sign indicates growth and a minus sign indicates no growth.

	<i>Compound tested</i>					
	A	B	C	D	E	G
Mutant 1	—	—	—	+	—	+
2	—	+	—	+	—	+
3	—	—	—	—	—	+
4	—	+	+	+	—	+
5	+	+	+	+	—	+

- What is the order of compounds A to E in the pathway?
- At which point in the pathway is each mutant blocked?
- Would a heterokaryon composed of double mutants 1,3 and 2,4 grow on a minimal medium? Would 1,3 and 3,4? Would 1,2 and 2,4 and 1,4?