1.6 Class counts

This is a logic puzzle in which you must determine the number of campers who attended each class. Though it is not stated explicitly, you should infer that the 16 campers who have given statements are the full set of campers going to these classes.

Note that since the statements tell you that specifc campers when to certain classes, the resulting attendance numbers must be consistent with this. That is, if you have identified n different campers that attended class X and m that did not, then the attendance in class X must have been at least n and at most $16 - m$. This is an essential part of the logic.

Solving the logic puzzle, one finds that the class counts must be as follows:

- Graph theory: 5
- Commutative algebra: 11
- Linear algebra: 12
- Complex analysis: 3
- Multivariable calculus: 5
- Combinatorial game theory: 9
- Generating functions: 9
- Point-set topology: 7

Using the attendance numbers as indices in the class names spells the puzzle answer: HERMIONE.

For reference, here is what you can deduce about which campers attended which classes:

- #1 went to commutative algebra, linear algebra, and combinatorial game theory
- #2 went to graph theory
- #3 went to commutative algebra, complex analysis, combinatorial game theory, and generating functions
- #4 went to commutative algebra and linear algebra
- #5 went to commutative algebra, combinatorial game theory, and point-set topology
- #6 went to commutative algebra, linear algebra, and generating functions
- #7 went to commutative algebra, linear algebra, and point-set topology
- #8 went to graph theory and point-set topology
- #9 went to complex analysis
- #10 went to commutative algebra, linear algebra, and multivariable calculus
- #11 went to linear algebra

- #12 went to graph theory and multivariable calculus
- #13 went to graph theory and complex analysis
- #14 went to commutative algebra, linear algebra, combinatorial game theory, and generating functions
- #15 went to ?
- #16 went to commutative algebra and linear algebra

At this point the counts are 4, 9, 8, 3, 2, 4, 3, 3 respectively, and it is possible to fill in the others in a way that is consistent with the final counts.