

Exam Questions

1. Discuss the complex representations of the symmetric group \mathfrak{S}_3 .
2. Describe the irreducible characters of the symmetric group \mathfrak{S}_4 .
3. Explain how standard tableaux and permutations in \mathfrak{S}_5 are related.

Hints.

- Can you accurately define all of the mathematical objects arising in your answers?
- Can you correctly state the needed mathematical results (theorems, lemmas, algorithms, etc.)?
- Can you provide examples that illustrate the key ideas?
- Can you identify or classify all examples?