Quiz 1, Wednesday October 14.

NAME:

Mark the squares that are followed by correct statements. All representations are considered over complex numbers.

☐   Any representation of the group $\mathbb{Z}/2$ is irreducible.

☐   Any representation of a finite group is completely reducible.

☐   The group algebra $\mathbb{C}[G]$ is commutative if and only if G is abelian.

☐   Any one-dimensional representation of the group S_3 is irreducible.

☐   The group S_4 has seven isomorphism classes of irreducible representations.

2. Give an example of a representation V of S_4 such that $\chi_V(1) = 4$.