alternating group of degree (n)

[MTH312] If $f, g \in S_{n}$ are odd, then $f \cdot g$ is _____
prime

[MTH312] One of these is not algebraic structure of group G if G is an Abelian group of order 8
$(Z_{2^{3}})$

[MTH312] An isomorphism onto itself is called _____
Automorphism

[MTH312] Let $o(G) = p^{2}$, then G is Abelian if p is _____
prime

[MTH312] In the theory of permutations, 2-cycles are called _____
Transpositions

[MTH312] The identity permutation is _____
even

[MTH312] Express (1 3 5) cycle as product of transpositions
(1 5)(1 3)

[MTH312] What is the signature of $1 \in S_{n}$
1

[MTH312] A group G is called simple if it has only normal subgroups
{e} and G itself