Reading Quiz §6

1. [2] Find a group that is isomorphic to a cyclic group of order 12.

2. True/False: If the statement is *always* true, give a *brief* explanation of why it is (not a formal proof!). If the statement is false, give a counterexample. Let G and H be groups written mulitplicatively and let a and b be elements of G

   (a) [1] If ϕ is an isomorphism between G and H, then $\phi(ab) = \phi(a)\phi(b)$.

   (b) [1] If $ab = ba$ then $\phi(a)\phi(b) = \phi(b)\phi(a)$.

   (c) [1] If ϕ is an isomorphism between G and H, then ϕ is an automorphism.