HOMEWORK 21

Note: $*$ marked problems might be slightly more difficult or interesting than the unmarked ones.

(1) Show that a functor $F : \mathcal{C} \to \mathcal{D}$ carries isomorphisms to isomorphisms.

(2) Let $p : E \to B$ a covering map. if B_0 is a subspace of B, and if $E_0 = p^{-1}(B_0)$, then show that the map $p_0 := p|_{E_0} : E_0 \to B_0$ is a covering map.

(3) Topology (Munkres), Chapter 9, Section 52, Exercise (1).

(4) Topology (Munkres), Chapter 9, Section 52, Exercise (4).

(5) Topology (Munkres), Chapter 9, Section 52, Exercise (5).

(6)* Topology (Munkres), Chapter 9, Section 52, Exercise (6).

(7) Topology (Munkres), Chapter 9, Section 53, Exercise (3).

(8) Topology (Munkres), Chapter 9, Section 53, Exercise (4).