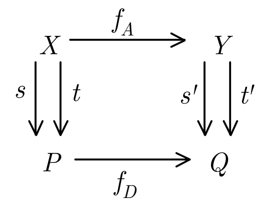
Homework #11. Due: Thurs 12/7

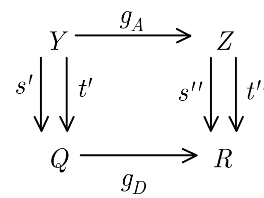
pg. 141, Exercise #10.

pg. 142, Exercises #11

Hint: You're given the following:



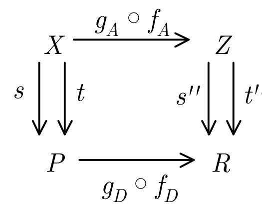
$f_D \circ s = s' \circ f_A$
$f_D \circ t = t' \circ f_A$



$g_D \circ s' = s'' \circ g_A$
$g_D \circ t' = t'' \circ g_A$

And you need to construct proofs for:

1. $(g_D \circ f_D) \circ s = s'' \circ (g_A \circ f_A)$
2. $(g_D \circ f_D) \circ t = t'' \circ (g_A \circ f_A)$

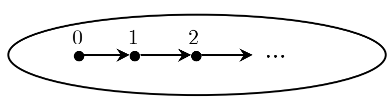


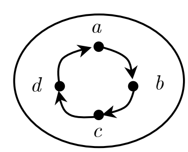
pg. 177, Exercise #1.

Hint: An element x of a set equipped with endomap α has both period 5 and 7 just when $\alpha^5(x) = x$, and $\alpha^7(x) = x$. To say x is a fixed point of α means $\alpha(x) = x$.

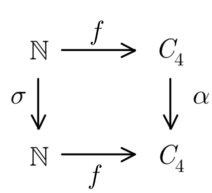
pg. 178, Exercise #2.

Hint: Recall that $\mathbb{N}^{\circlearrowleft\sigma}$ and C_4 look like:

$\mathbb{N}^{\circlearrowleft\sigma} =$ 

$C_4 =$ 

and any $\boldsymbol{\mathcal{S}}^{\circlearrowleft}$-map f fron $\mathbb{N}^{\circlearrowleft\sigma}$ to C_4 must satisfy:



$\alpha \circ f = f \circ \sigma$