

Notation

I	the unit interval $[0, 1]$
1_X	the identity function on a space X
$f \simeq g$	functions $f, g : X \rightarrow Y$ are homotopic
$X \simeq Y$	spaces X and Y are homotopy equivalent
$Y \searrow X$	Y collapses to X
$K \searrow L$	K collapses (cellularly) to L
$L \nearrow K$	L expands (cellularly) to K
$K \searrow^s L$	K collapses (simplicially) to L
$L \nearrow^s K$	L expands (simplicially) to K
$K \searrow^e L$	K collapses to L by an elementary collapse
$L \nearrow^e K$	L expands to K by an elementary expansion
$K \wedge L$	K and L have the same simple homotopy type