C

$f:$
$X \to$
Y,
$g:$
$Z \to$
W
C
fg
f
g
g
f
f
g
F
G
FG
fg
$f \in$
$F, g \in$
G
fG
Fg
A
A
$\{f \mid$
$fa \, for \, all \in$
$A\}. Similarly \, define$
A
f
$X \to$
Z
C
S
C
α
$X \to$
$\alpha \to$
C
$i \neq$
0
$\prod_{j<i} X(j) \to$
$X(i)$
S
$X(0) \to_{i \in \alpha}$
$X(i)$
S
$\alpha =$
$[2]$
S_i
$\bigcap_i S_i$
S
S
S
$cosat$-
u-
$rated$
C
B
B
S
s, Set
$f =$
pj
$i \in$
S
$p \in$
S
S
set
s, Set
s, Set
$S =$
(S)
$S \subseteq$
(S)
f
fS
$f =$
pj
$i \in$
$S, p \in$
S

$\bullet [d,"f"][r,"id"][rr, bend \, left =$
$60, "id"] \bullet$
$[d,"j"][r,"id"] \bullet$
$[d,"f"]$
$\bullet$
$[r, dashed, "s"][rr, bend \, right =$
$60, "id"] \bullet$
$[r,"p"] \bullet$
S
$f \in$
S