15/11

SOLUZIONE ESERCIZI

ESERCIZIO 1

LET TWICE = FUN f → f(f1)

OPPURE LET TWICE = f(f1)

2) (INT → INT) → INT

3) TWICE(FUN x → x+1)

4) TWICE(FUN x → x · 10)

ESERCIZIO 2

1) LET SCALAR m(x,y) = m * x, m * y

LET DOUBLE_VEC (x,y) = SCAL 2 (x,y)

2) LET ADD_VECT (x1,y1) (x2,y2) = (x1 + x2, y1 + y2)

LET MOVERIGHT m(x,y) = ADDVECT (x,y) (m,0)

// // m = ADDVECT(m,0)

ESERCIZIO 3

1) LET REC GENSUM f n =

IF N < 0 THEN 0 ELSE F n + GENSUM F(n-1)

LET SUM SQUARE = GENSUM (FUN x → x+x)

LET SUM CUBE = GEN SUM (FUN x → x * x * x)

2) LET REC GEN PROD F N =

IF N<0 THEN 1 ELSE F * GENPROD F(n-1)

LET FACT = GEN PROD (FUN x → IF x=0 THEN
1 ELSE x)

LET TWO RAISED TO = GENPROD (FUN x → IF x=0
THEN 1 ELSE 2)