

C311 Assignment 13

Inference Rules

April 14, 2005

Multiplication

$$\frac{\Gamma \vdash a : \text{int} \quad \Gamma \vdash b : \text{int}}{\Gamma \vdash (* a b) : \text{int}}$$

Addition

$$\frac{\Gamma \vdash a : \text{int} \quad \Gamma \vdash b : \text{int}}{\Gamma \vdash (+ a b) : \text{int}}$$

sub1

$$\frac{\Gamma \vdash a : \text{int}}{\Gamma \vdash (\text{sub1 } a) : \text{int}}$$

car

$$\frac{\Gamma \vdash a : (\text{pair } t_1 t_2)}{\Gamma \vdash (\text{car } a) : t_1}$$

cdr

$$\frac{\Gamma \vdash a : (\text{pair } t_1 t_2)}{\Gamma \vdash (\text{cdr } a) : t_2}$$

cons

$$\frac{\Gamma \vdash a : t_1 \quad \Gamma \vdash b : t_2}{\Gamma \vdash (\text{cons } a b) : (\text{pair } t_1 t_2)}$$