

# Translating into Algebra

## Value Definitions

Racket Code	Algebra
(define x 10)	$x = 10$
(define y (* x 2))	$y = x * 2$
(define z (+ x y))	$z = x + y$
(define age 14)	$age = 14$
(define months (* age 12))	$months = age * 12$
(define days (* months 30))	$days = months * 30$
(define hours (* days 24))	$hours = days * 24$
(define minutes (* hours 60))	$minutes = hours * 60$

## Function Definitions

Racket Code	Algebra
(define (area length width) (* length width))	$area(length, width) = length * width$
(define (circle-area radius) (* pi (sqr radius)))	$circle-area(radius) = pi * radius^2$
(define (distance x1 y1 x2 y2) (sqrt (+ (sqr (- x1 x2)) (sqr (- y1 y2)))))	$distance(x1, y1, x2, y2) = \sqrt{(x1 - x2)^2 + (y1 - y2)^2}$