

# Translating into Algebra

## Value Definitions

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

## Function Definitions

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