

Creating Contracts From Examples

Directions : For each of the following collections of Examples, write the contract for the function above the examples.

1. `; third-root : Number -> Number`
(EXAMPLE (third-root 16)
 (expt 16 1/3))
(EXAMPLE (third-root 125)
 (expt 125 1/3))
(EXAMPLE (third-root 625)
 (expt 625 1/3))
2. `; sentence-length : String Number -> Number`
(EXAMPLE (sentence-length "hello" 5)
 (+ (string-length "hello") 5))
(EXAMPLE (sentence-length "please" 6)
 (+ (string-length "please") 6))
(EXAMPLE (sentence-length "goodbye" 10)
 (+ (string-length "please") 10))
3. `; upside-down : Image -> Image`
(EXAMPLE (upside-down (triangle 50 "solid" "yellow"))
 (rotate 180 (triangle 50 "solid" "yellow")))
(EXAMPLE (upside-down (star 150 "outline" "blue"))
 (rotate 180 (star 150 "outline" "blue")))
4. `; product-squared : Number Number -> Number`
(EXAMPLE (product-squared 5 6)
 (sqr (* 5 6))
(EXAMPLE (product-squared 10 17)
 (sqr (* 10 17)))
(EXAMPLE (product-squared 2 5)
 (sqr (* 2 5)))
5. `; half-image : String -> Image`
(EXAMPLE (half-image "www.images.com/cat_image")
 (scale .5 (bitmap/url "www.images.com/cat_image"))))
(EXAMPLE (half-image "www.images.com/dog_image")
 (scale .5 (bitmap/url "www.images.com/dog_image"))))
6. `; triple : Number -> Number`
(EXAMPLE (triple 4)
 (* 4 3))
(EXAMPLE (triple 10)
 (* 10 3))
(EXAMPLE (triple 3)
 (* 3 3))