

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`

examples:

`third-root(16) is expt(16, 1/3)`

`third-root(125) is expt(125, 1/3)`

`third-root(625) is expt(625, 1/3)`

end

2. `sentence-length : : String, Number -> Number`

examples:

`sentence-length("hello", 5) is string-length("hello") + 5`

`sentence-length("please", 6) is string-length("please") + 6`

`sentence-length("goodbye", 10) is string-length("goodbye") + 10`

end

3. `upside-down : : Image -> Image`

examples:

`upside-down(triangle(50, "solid", "yellow")) is`

`rotate(180, triangle(50, "solid", "yellow"))`

`upside-down(star(150, "solid", "blue")) is`

`rotate(180, star(150, "solid", "blue"))`

end

4. `product-squared : : Number, Number -> Number`

examples:

`product-squared(5, 6) is sqr(5 * 6)`

`product-squared(10, 17) is sqr(10 * 17)`

`product-squared(2, 5) is sqr(2 * 5)`

end

5. `half-image : : String -> Image`

examples:

`half-image("www.images.com/cat_image") is`

`scale(0.5, bitmap/url("www.images.com/cat_image"))`

`half-image("www.images.com/dog_image") is`

`scale(0.5, bitmap/url("www.images.com/dog_image"))`

end

6. `triple : : Number -> Number`

examples:

`triple(4) is 4 * 3`

`triple(10) is 10 * 3`

`triple(3) is 3 * 3`

end