

Creating Contracts From Examples

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

1. ; _____ : _____ -> _____

```
(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. ; _____ : _____ -> _____

```
(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. ; _____ : _____ -> _____

```
(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. ; _____ : _____ -> _____

```
(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. ; _____ : _____ -> _____

```
(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. ; _____ : _____ -> _____

```
(EXAMPLE (triple 4)
  (* 4 3))
(EXAMPLE (triple 10)
  (* 10 3))
(EXAMPLE (triple 3)
  (* 3 3))
```