

CS 2322 Solutions to Laboratory Problem Set 1

September 14, 2006

- Problem: Using Explicit Definition

NB. The square function (explicit definition)

```
square =: monad define script
y.^2
)
```

NB. The sum_of_squares function (explicit definition)

```
sum_of_squares =: dyad define script
(square x.)+square y.
)
```

NB. Some examples

```
square 3
3 sum_of_squares 4
```

- Problem: Using Tacit Definition

NB. Tacit Definition

NB. Dyad

```
sum_of_squares =: + & (^&2)
```

NB. Also, works as the generalization (below) and as

NB. a dyad (why?).

```
sum_of_squares =: +/ & (^&2)
```

NB. Monad

NB. Generalization of `sum_of_squares`

```
sum_sq =: +/ @ (^&2)
```

NB. Also

```
+/ & (^&2)
```

NB. and

```
+/ @: *:
```