

1. Give types of:

- $f.x = 3$
- $f.2$
- $f.x$
- $x.f$
- $(.)$
- $g(f.x)$
- $[(+1), (1+), (+)]$
- $('a', \text{ord.}'a')$
- $(+).y$
- k where $k.x.y = x$
 $k.3, k.'a', k.(+)$

2. What does following function compute?

```
m.x.y
| x <= y = y
| otherwise = x
```

Type of m ?

Type of $m.x$?

3. What is the type of reduce.m.0 ? What does it compute?

4. True or False?

$\text{sum}(x++y) = \text{sum}.x + \text{sum}.y$

$\text{length}.(x++y) = \text{length}.x + \text{length}.y$

$\text{map.f}.(x++y) = \text{map.f}.x ++ \text{mapf}.y$