

Name: \_\_\_\_\_

Kerberos: \_\_\_\_\_

;; Consider the following deriv function, that returns a new function that calculates  
;; (an approximate) derivative of the function f:

```
(define (deriv f dx)
  (lambda (x) (/ (- (f (+ x dx))
                    (f (- x dx))))
    (* 2 dx))))
```

```
(define (foo x) (* 3 x x x))
(define dfoo (deriv foo 0.001))
```

```
;; What will this print?
(print "first deriv of foo at 1:" (dfoo 1))
```

;; We'd like to generalize this to an nth-deriv function, so we can do things like:

```
(print "first deriv of foo at 1:" ((nth-deriv 1 foo 0.001) 1))
```

```
(print "fourth deriv of foo at 1:" ((nth-deriv 4 foo 0.001) 1))
```

;; Complete the implementation of nth-deriv:

```
(define (nth-deriv n f dx)
```

```
)
```