; Quiz 1 Reminder Sheet — this will be printed on the back of the quiz paper for you to reference.

; A program is a sequence of expressions and statements.

; ● Expression Forms ●

; Literal Value

 ; inserted/pasted image
`function-name` ; function, by name, from the language or from a definition
`±n.n ±n/n` ; number, in decimal or fractional form
`#true #false` ; boolean

; Variable Reference

`variable-name` ; variable, from a definition

; Function Call

```
(function-name expression etc)
; — the expressions after the function name are the “argument” expressions
```

; ● Statement Forms ●

; Definition of Variable

```
(define variable-name expression)
; — the expression after the variable name is the “value” expression
```

; Definition of Function

```
(define (function-name parameter-name etc)
  expression)
; — the parenthesized function name with parameter names is the “header”
; — the expression after the header is the “body” expression
```

; Reveal Algebraic Evaluation Sequence

```
(step expression)

; Show the sequence of expressions produced by replacing sub-expressions
; that are in the following forms, until that produces the literal value of the
; expression or stops and reports an error.

... (function-name literal-value etc) ...

; • For a function from our language: substitute a directly computed value,
;   or report an error if there are the wrong number or kind of arguments
;   needed by the function.

; • For a function from a definition: copy its body and substitute the arguments
;   in place of the parameter names wherever those names occur in the body,
;   or report an error if the number of arguments and parameter names differ.

... variable-name ...
 → literal-value

; Substitute the value that was computed when the variable was defined.
```

; Function Examples

; ● Type Predicates ●

```
(image?  )       #true
(function? flip)   #true
(number? -12.3)    #true
(boolean? #false)  #true
```

; ● Function Predicates ●

```
(unary?  flip)  #true
(binary? flip)  #false
```

; ● Image Functions ●

```
(mirror  )
(flip    )

(turn  30) 
(clockwise  )
(anti-clockwise  )

(scale  1.5) 

(small  )
(large )
```

```
(scale-width  1.5) 

(thin  )
(wide  )
```

```
(scale-height  1.5) 

(tall  )
(short  )
```

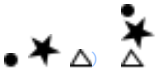
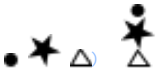
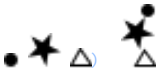
```
(triangle 9) 
(circle   9) 
(square   9) 

(solid-triangle 9) 
(solid-circle   9) 
(solid-square   9) 
```

```
(oval      9 15) 
(rectangle 9 15) 

(solid-oval      9 15) 
(solid-rectangle 9 15) 
```

```
(width  (oval 9 15))   9
(height (oval 9 15))  15
```

```
(above-left  )
(above       )
(above-right  )

(beside-top     )
(beside         )
(beside-bottom  )
```

; ● Numeric Functions ●

```
(+ 2 10 3)  15    (- 12)  -12    (/ 12 3)  4
(* 2 10 3)  60    (- 12 3)  9
```