socrative

2018 11.1 Score: ____

1. Given the following expression, which statements are true?

((lambda (z) (x y z)) (lambda (x) (x y z)))

Ⓐ x occurs both free and bound; y occurs both free and bound; z occurs both free and bound

Ⓑ x occurs free ; y occurs both free and bound; z occurs both free and bound

Ⓒ x occurs both free and bound; y occurs free; z occurs both free and bound

Ⓓ x occurs both free and bound; y occurs both free and bound; z occurs free

Ⓔ x occurs bound; y occurs bound; z occurs bound

2. What does this expression evaluate to?
(or (and (not #t) (or (and #t #f) #t) (or #t #t)))

Ⓐ True

Ⓑ False

3. What does this expression evaluate to?
(or (and (not #t) (or (and #t #f) #t))(or #t #t))

Ⓐ True

Ⓑ False

4. What does this expression evaluate to?
(or "hello" 1 3 #t)

Ⓐ "hello"

Ⓑ 1

Ⓒ 3

Ⓓ #t

Ⓔ #f

5. What does this expression evaluate to?
(and "hello" 1 3 #t)

Ⓐ "hello"

Ⓑ 1

Ⓒ 3

Ⓓ #t

Ⓔ #f

6. What does this expression evaluate to?

```
(and #f "hello" 1 3 #t )
```

Ⓐ "hello"

Ⓑ 1

Ⓒ 3

Ⓓ #t

Ⓔ #f

7. What does this expression evaluate to?

```
(or #f "hello" 1 3 #t )
```

Ⓐ "hello"

Ⓑ 1

Ⓒ 3

Ⓓ #t

Ⓔ #f

8. Given the following function (which appears in two other questions **unchanged**)

```
(define soc (lambda (x y z)
(if (> x z)
(* x y)
(* x z)
)))
```

What is the output of **(soc 1 2 3)**?

Ⓐ 1

Ⓑ 2

Ⓒ 3

Ⓓ 4

Ⓔ 6

9. Given the following function (which appears in two other questions **unchanged**)

```
(define soc (lambda (x y z)
(if (> x z)
(* x y)
(* x z)
)))
```

What is the output of **(soc 3 2 1)**?

Ⓐ 1

Ⓑ 2

Ⓒ 3

Ⓓ 4

Ⓔ 6

10. Given the following function (which appears in two other questions **unchanged**)

```
(define soc (lambda (x y z)
(if (> x z)
(* x y)
(* x z)
)))
```

What is the output of **(soc 2 1 2)**?

Ⓐ 1

Ⓑ 2

Ⓒ 3

Ⓓ 4

Ⓔ 6

11. Given the following function definitions (which appear **unchanged**) in three other questions:

```
(define fail (lambda (x) (< x 40)))
(define fail2 (lambda (x) (if (< x 40) "Yes" #f)))
(define fail3 (lambda (x) (if (< x 40) #t "No")))
```

What is the output of **(or (fail3 50) (fail 23))**?

Ⓐ "Yes"

Ⓑ "No"

Ⓒ #t

Ⓓ #f

Ⓔ Something not listed above

12. Given the following function definitions (which appear **unchanged**) in three other questions:

```
(define fail (lambda (x) (< x 40)))
(define fail2 (lambda (x) (if (< x 40) "Yes" #f)))
(define fail3 (lambda (x) (if (< x 40) #t "No")))
```

What is the output of **(or (fail2 50) (fail 23))**?

Ⓐ "Yes"

Ⓑ "No"

Ⓒ #t

Ⓓ #f

Ⓔ Something not listed above

13. Given the following function definitions (which appear unchanged) in three other questions:
(define fail (lambda (x) (< x 40)))
(define fail2 (lambda (x) (if (< x 40) "Yes" #f)))
(define fail3 (lambda (x) (if (< x 40) #t "No")))
What is the output of (and (fail3 50) (fail 23))?

- Ⓐ "Yes"
- Ⓑ "No"
- Ⓒ #t
- Ⓓ #f
- Ⓔ Something not listed above

14. Given the following function definitions (which appear unchanged) in three other questions:
(define fail (lambda (x) (< x 40)))
(define fail2 (lambda (x) (if (< x 40) "Yes" #f)))
(define fail3 (lambda (x) (if (< x 40) #t "No")))
What is the output of (and (fail2 50) (fail 23))?

- Ⓐ "Yes"
- Ⓑ "No"
- Ⓒ #t
- Ⓓ #f
- Ⓔ Something not listed above