CSCI 4220 Quiz 3
– Expression Evaluation –

Instructions

The following quiz contains only multiple choice questions.

On the blackboard there will be an image of this quiz. That is, a quiz having the same questions, same answers, and same order of questions and answers. In order to get credit for taking this quiz, you will need to enter your answers for this quiz on the blackboard. The blackboard will then record your grade for the quiz.

Problem 1. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => x + 1)(5) * 8$$

1. 41

2. 48

3. ill-formed expression

4. none of the above

Problem 2. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => x * 4)(5 * 2) + 3$$

1. 43

2. 52

3. ill-formed expression

4. none of the above

Problem 3. (5 points)

What is the result of evaluating the following expression?

$$(fn\ y => 2 - y)\ 3 - 5$$

1. 0
2. 4
3. ill-formed expression
4. none of the above

Problem 4. (5 points)

What is the result of evaluating the following expression?

$$(fn\ f => f\ 2)(fn\ y => 2 - y)$$

1. 0
2. ~ 2
3. ill-formed expression
4. none of the above

Problem 5. (5 points)

What is the result of evaluating the following expression?

$$(fn\ f => f)(fn\ y => 2 - y)\ 2$$

1. 0
2. ~ 2
3. ill-formed expression
4. none of the above

Problem 6. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => fn\ y => x * y)\ 3 * 2\ 5 + 4$$

1. 34
2. 54
3. ill-formed expression
4. none of the above

Problem 7. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => fn \ y => x + 1) \ 3$$

1. 4

2. $fn \ y => 3 + 1$

3. $fn \ y => 4$

4. ill-formed expression

Problem 8. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => x) \ (fn \ x => x)$$

1. x

2. $fn \ x => x$

3. ill-formed expression

4. none of the above

Problem 9. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => fn \ y => 3 * x + y) \ (5 * 2)(3 * 4)$$

1. 42

2. 66

3. ill-formed expression

4. none of the above

Problem 10. (5 points)

What is the result of evaluating the following expression?

$$(fn \ x => fn \ y => x + y) \ 3 \ 2 * 5$$

1. 13

2. 25

3. ill-formed expression

4. none of the above

Problem 11. (5 points)

What is the result of evaluating the following expression?

$$fn\ x => 1 + 1$$

1. $fn\ x => 1 + 1$

2. $fn\ x => 2$

3. 2

4. ill-formed expression

Problem 12. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => fn\ y => x + 2 * y)\ 2\ (3 * 2)$$

1. 14

2. 16

3. ill-formed expression

4. none of the above

Problem 13. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => fn\ y => x * y)\ (3 + 2)\ 10\ div\ 2$$

1. 0

2. 25

3. ill-formed expression

4. none of the above

Problem 14. (5 points)

What is the result of evaluating the following expression?

$$1 + (fn\ x => fn\ y => x * y)\ 3\ 4 + 5$$

1. 14

2. 18

3. ill-formed expression

4. none of the above

Problem 15. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => x)\ 3 * 6$$

1. 12

2. 18

3. ill-formed expression

4. none of the above

Problem 16. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => if\ true\ then\ 1\ else\ 0)$$

1. $if\ true\ then\ 1\ else\ 0$

2. 1

3. ill-formed expression

4. none of the above

Problem 17. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => 3)\ 4 * 6$$

1. 18

2. 24

3. ill-formed expression

4. none of the above

Problem 18. (5 points)

What is the result of evaluating the following expression?

$$(fn\ f => (fn\ y => f\ y)\ 3)\ (fn\ x => x + 4)$$

1. 7

2. $(fn\ y => (fn\ x => x + 4)\ y)$

3. ill-formed expression

4. none of the above

Problem 19. (5 points)

What is the result of evaluating the following expression?

$$(fn\ x => (fn\ y => x + x))\ 4$$

1. $(fn\ y => 4 + 4)$

2. $(fn\ y => 8)$

3. ill-formed expression

4. none of the above

Problem 20. (5 points)

What is the result of evaluating the following expression?

$$(fn\ f => (fn\ g => g\ 5 + 2)\ f)\ (fn\ x => x + x)$$

1. 12

2. 14

3. ill-formed expression

4. none of the above