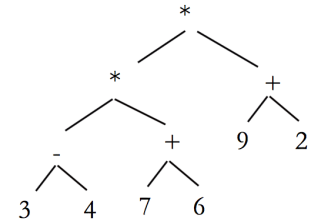


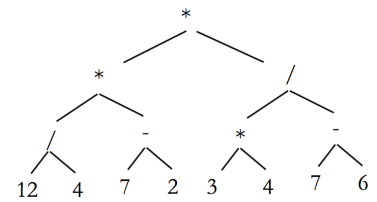
10.1

Score: _____

1. What does this AST evaluate to?

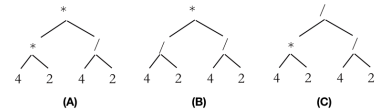


2. What does this AST evaluate to?



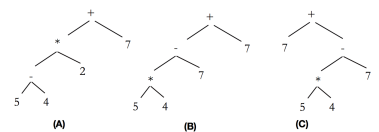
3. Which of the following ASTs does **not** evaluate to 4?

- ☐ A
- ☐ B
- ☐ C



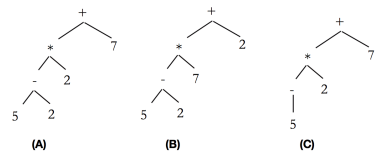
4. Which of the following ASTs is equivalent to $(+ (* (- 5 4) 2) 7)$?

- ☐ A
- ☐ B
- ☐ C



5. Which of the following ASTs is equivalent to $(+ (* (- 5) 2) 7)$?

- ☐ A
- ☐ B
- ☐ C



6. Which of the following prefix notation expressions is equivalent to $(2 * 5 + 3 * 4)$?

- ☐ A $(* (+ 3 5) (* 2 4)$
- ☐ B $((* 2 5) + (* 3 4))$
- ☐ C $(+ (* 2 5) (* 3 4))$
- ☐ D $(+ (2 * 5) (3 * 4))$
- ☐ E $(* (+ 2 5) (+ 3 4))$

7. Which of the following prefix notation expressions is equivalent to $(2 + X^2 * 4 + 3)$?

- ☐ A $(* 4 (+ (+ 3 (sqr X)) 2))$
- ☐ B $(+ 3 (+ (* 4 (sqr X))) 2)$
- ☐ C $(+ 3 (+ (* 4 (sqr X^2) 2)))$
- ☐ D $(+ 3 (+ (* 4 X^2) 2))$
- ☐ E $(+ 3 (+ (* 4 (sqr X)) 2))$

8. Starting with an empty stack, what is the **output** after the following operations are performed, given the input string of 123456? *Hint: Anything popped off the stack goes to the output.*

OXOOOXOOXX

- ☐ A 3452
- ☐ B 1345
- ☐ C 4235
- ☐ D 4235
- ☐ E 1234

9. Starting with an empty stack, what is the **output** after the following operations are performed, given the input string of 123456? *Hint: Anything popped off the stack goes to the output.*

OOXOXOOXXO

- ☐ A 3452
- ☐ B 2354
- ☐ C 4235
- ☐ D 1465
- ☐ E 1234