2018 8.2 Score: _____

1. What does this AST evaluate to?

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2. What does this AST evaluate to?


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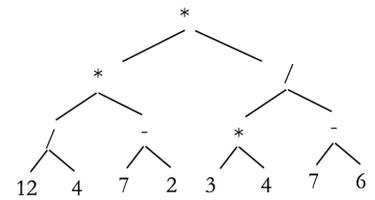
3. Which of the following ASTs does **not** evaluate to 4?

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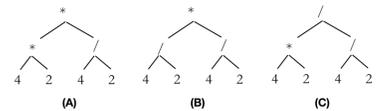
4. Which of the following ASTs is equivalent to (+ (* (- 5 4) 2) 7)?

- (A) A
- (B) B
- (C) C
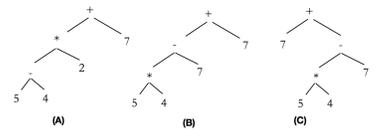
5. Which of the following ASTs is equivalent to (+ (* (- 5) 2) 7)

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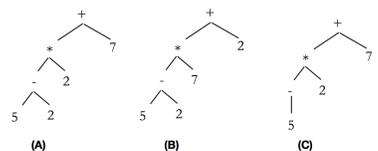
6. Which of the following prefix notation expressions is equivalent to (2 * 5 + 3 * 4)?

(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 ouput.

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(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 ouput.

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(A) 3452

(B) 2354

(C) 4235

(D) 1465

(E) 1234