

# Computer Science I

**CMPE/CSCI 1370 - 01**

MW 9:25 am - 10:40 am

**<http://bit.ly/1370abcde>**

# Key themes

- Programmability and automation
- Computational thinking
- Abstraction

# Automation: Programs

- Arbitrary
- Unambiguous
- Appropriate levels of abstraction

**Expressions**

**Data types**

**Syntax and semantics**

# DrRacket IDE

# Expressions

# Syntax

# Semantics

# More types of data!



**What is the type of the expression:**

**"352"**

**A. number**

**B. string**

**C. boolean**

**D. image**

**E. syntax error**

**What is the purpose of  
explicitly distinguishing  
between different types of  
data?**

# **Operations**

## **(compound expressions)**

**Which of the below are valid expressions that represent addition in BSL?**

**A.** `(+ 3)`

**B.** `(+ 3 2)`

**C.** `(3 + 2)`

**D.** `(+ 2 3 (+ 6 -34) )`

**E. More than one of the above**

**What is the syntax for the addition operation in BSL?**

# Arguments

## Call / Invoke / Apply

**Which of the following is a Racket compound expression whose value is the square root of 36?**

**A. (sqrt 36)**

**B. sqrt(36)**

**C. 6**

**D (6)**

```
; number string string -> image
;
; purpose: expects a radius in pixels, either "solid" or
; "outline", and a color written as a string, and
; produces a circle image with that
; radius, style, and color

(circle 30 "solid" "red")
```



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(circle 30 "solid" "red")
```

**With respect to providing arguments to `circle`, what are the ways we can do this incorrectly?**

# More operations!

**What is the type of the following expression:**

```
(>= (+ (string-length "hello world")  
        60) 80)
```

**A. number**

**B. string**

**C. boolean**

**D. image**

**E. syntax error**

# Attendance!

<http://bit.ly/1370-01-attendance>