

Code Sleuth

Symbolic logic

Inference

Assume this code runs first:

```
precipitation_mm <- 0.5
temperature_f <- 92
is_rainy <- precipitation_mm >= 2.5
is_hot <- temperature_f >= 85
```

Code example	Output
<code>is_rainy is_hot</code>	<code>[1] TRUE</code>
<code>is_rainy && is_hot</code>	<code>[1] FALSE</code>
<code>!is_rainy</code>	<code>[1] TRUE</code>

What do the *symbolic logic* operators (`||`, `&&`, `!`) do?

Prediction

What will be the output of the following expression?

Code example	Output
<pre>t <- 2006 is_crown_of_thorns <- t == 2008 t == 2010 is_crown_of_thorns</pre>	

If-else if-else

Inference

Code example	Output
<pre>day_of_week <- "Monday" if (day_of_week == "Tuesday") { dinner <- "Tacos" } else if (day_of_week == "Monday") { dinner <- "Meatless" } else { dinner <- "Leftovers" } dinner</pre>	[1] "Meatless"

Why is the output "Meatless"? Why isn't it "Tacos" or "Leftovers"?

Prediction

Using the type coercion rules you inferred above, what will be the output of the following expression?

Code example	Output
<pre>precipitation_mm <- 0.5 temperature_f <- 92 if (precipitation_mm >= 0.5 && temperature_f >= 65) { jacket <- "raincoat" } else if (temperature_f <= 55) { jacket <- "puffy" } else { jacket <- "none" } jacket</pre>	