

Problem Set 1, Problems 0 and 1

Problem 0: Reading and response

Put your response to the reading below.

I partially agree with the statement that “whether in science or business, we don’t have to settle for models at all” because from my point of view, the progress no matter in science or business is to move from reflection to improvement. To be more specific, I mean to learn from the knowledge or experience in the past and try to modify it to fit into the future conditions. However, we need models to reflect whether the knowledge or experience that we gained in the past were good or not while applying it in future conditions. But to make progress in the future, both ways– to modify the previous model or to be totally innovative, like the example Google mentioned in the article– could be successful. Therefore, I would agree with the statement that we need models to reflect the past and may not have to settle for models to make future progress.

Problem 1: Statements, expressions and conditional execution

1-1. Tracing a simple program

line of code	x	y	z
x = 11	11		
y = 5	11	5	
y = y * 3	11	15	
z = y - x	11	15	4
x = x // 3	3	15	4
y = z % 3	3	1	4

1-2. Assignment statements and expressions

a) $a = a + 5$

b) $b ** a$

c) $b = a / 3$

d) $a == b$

e) $a \% 3 == 0$

f) $b < 6$ or $b > 16$

1-3. Conditional execution: Calls to the function `mystery()`

function call	output
a. <code>mystery([5, 7, 1])</code>	mound redound
b. <code>mystery([4, 4, 6])</code>	round redound
c. <code>mystery([8, 6, 3])</code>	found redound
d. <code>mystery([1, 2, 3])</code>	zounds redound
e. <code>mystery([2, 8, 8])</code>	mound ground redound