

Problem Set 1, Problems 0 and 1

Problem 0: Reading and response

Put your response to the reading below.

- 1. The author refers to one's "MySpace" page. This is a clear, if superficial, way in which this article (which was written in 2008) shows its age. What is a *deeper* way in which the ideas of this article betray thinking that has moved on since 2008? Contrast one of its ideas with more recent thinking, which can be your own, others', or both.**

Google has done more with using data science for advertising. There are ads on many web pages that are chosen based on the user's search words. Also, data science has become greatly more popular since 2008. Data scientists are in high demand due to the usefulness of large sets of data. Although data science is becoming more popular, I think models are just as or more important. As in the psychology example, I think it is important to know why because then you can predict certain trends instead of waiting for them to happen.

The article states that, whether in science or business, we "don't have to settle for models at all." Do you agree or disagree with this statement? How? And why? Certainly feel free to articulate a more nuanced or hybrid view, if you'd like.

I disagree. I think that sometimes it is important to have detailed information on a certain topic rather than lots of generalized information. Like in the shotgun gene sequencing by J. Craig Venter, in some cases it may be better to have an organism's entire genome rather than just part of. For instance, in a scientific study, scientists may want to know the exact differences in DNA between organisms.

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	
x = x + 6	17	5	
z = y + x	17	5	22
x = x // 7	2	5	22
y = z % 3	2	1	22

1-2. Assignment statements and expressions

a) $a = a + 5$

b) $b**a$

c) $b = a / 3$

d) $a == 3b + 2$

e) $a \% 3$

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

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

function call	output
a. <code>mystery([3, 3, 3])</code>	<code>'mowdowrow'</code>
b. <code>mystery([3, 4, 5])</code>	<code>'towrow'</code>
c. <code>mystery([5, 3, 2])</code>	<code>'mowrow'</code>
d. <code>mystery([5, 5, 7])</code>	<code>'nowhowrow'</code>
e. <code>mystery([6, 4, 6])</code>	<code>'bowrow'</code>