

Problem Set 0, Problems 0 and 1

Problem 0: Reading and response

What was the most interesting or important idea in this article for you – and why?

The most important idea in the article, to me, was the idea that technology should help advance design rather than hold it back. The concept of taking a digital image and making it into a tangible object (like a watercolor painting or a mesh cast) to help express ideas is similar in my mind to that of a 3d printer. I've always been intrigued by ways objects could be made more efficient and how little advancement has been made in so many common objects in our lives. Even casts have largely remained unchanged, even though every person who has worn a cast at some point has the same complaint. It is gross how moisture builds under it until it is removed. The idea of a mesh cast, even considering key points where ventilation is needed, is genius. Without technology, the design process for this would take a pointless amount of time per person. I think the concepts in this article are great examples of how computer programs can help improve the lives of millions of people.

Problem 1: Variables, expressions and assignment statements

1-1. Tracing a simple program

line of code	x	y	z
x = 3	3	3	
y = 15	3	15	
z = y - x	3	15	12
y = y // 4	3	3	12
x = x ** 2	9	3	12
y = z % 5	9	2	12

1-2. Assignment statements and expressions involving numbers

- a) $a * 3$
- b) $a = a + (b * 2)$
- c) $b \% 4$
- d) $b = a / 3$

1-3. Assignment statements and expressions involving strings

- a) $s = t[-2:]$
- b) $s[:3]$
- c) $t[0] + s[-1]$
- d) $t = [::2]$