

ICS Homework Week 7

October 11, 2022

1. **Type Casting** Assume we are using **64-bit machine**. Consider the following program.

```
1 char a = -6;
2 unsigned char b = a;
3 unsigned short c = a;
4 int d = a;
5 short e = 0xcafe;
6 unsigned char f = e;
7 unsigned int g = e;
```

Write the value of variables below in decimal.

Variable	Value
a	-6
b	250
c	65530
d	-6
e	-13570
f	254
g	4294953726

2. **Value Comparison** Assume int value is encoded using **16 bits**. Please fill in the following table with "<",">" or "=". *U* means the constant is unsigned.

Constant A	Constant B	A ? B
-2U	-1U	<
-1	1	<
-1	100U	>
-1	65535U	=
-32767	32768U	>