CSE31 HW2

Problem 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Binary | Unsigned | Signed | 1’s Complement | 2’s Complement | Biased |
| 1001 0110 | 150 | -106 | -105 | -106 | 22 |
| 0110 1001 | 105 | 105 | 105 | 105 | -20 |
| 0011 1100 | 60 | 60 | 58 | 58 | -70 |
| 1111 0000 | 240 | -16 | -16 | -16 | 112 |



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Property | Unsigned | Signed | 1’s Comp | 2’s Comp | Biased |
| Can represent positive numbers | T | T | T | T | T |
| Can represent negative numbers | F | T | T | T | T |
| Has more than one representation for 0 | F | T | T | F | F |
| Use the same addition process as unsigned | T | F | F | T | F |

1. What is the value in decimal of the most negative 16-bit 2’s complement integer?

-32768(base 10)

1. What is the value in decimal of the most positive 16-bit signed integer?

32768(base 10)