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ECE 310.

1. a) 2's complement Overflow (5). (4.)

$$00101101, 01101001 \Rightarrow 01101, 0111$$

$$111110010, 10010110 \Rightarrow 10010, 1001$$

2) Saturation Overflow

$$① \Rightarrow 0111, 1111$$

$$② \Rightarrow 10010, 1001$$

b) 2's complement (4). (3.)

$$① \Rightarrow 101, 011$$

$$② \Rightarrow 0010, 101$$

2) Saturation

$$① \Rightarrow 0111, 111$$

$$② \Rightarrow 1000, 000$$

$$2. 00001011, 011100 \Rightarrow 01011, 0111$$

$$1110000, 10010 \Rightarrow 10000, 1001$$

$$3. -4 + 0 + 1 + \frac{1}{4} + \frac{1}{8} = -2\frac{5}{8}$$