Practice Sheet-1

Arithmetic operations on signed numbers

1. Considering an 8-bit processor, perform the following arithmetic operations and state whether the overflow condition exists or not.

(a) (-64) + (-79)

(b) 125 + 2

(c) 111 – 126

(d) (-100) – (-100)

(e) 100 + 100

(f) 75 - (-55)

(g) (-56) + 65

(h) 127+(-128)

(i) (-60)+(-80)

2. Considering a 4-bit processor, perform the following arithmetic operations and state whether the overflow condition exists or not.

(a) 6+7

(b) (-7) - (-1)

(c) 4 – (-5)

(d) (-1) + (-8)

(e) 3-4