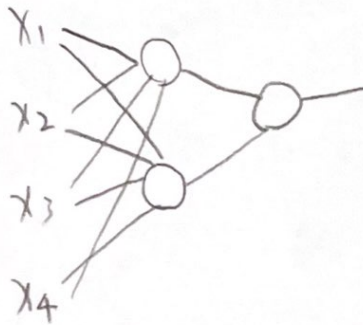
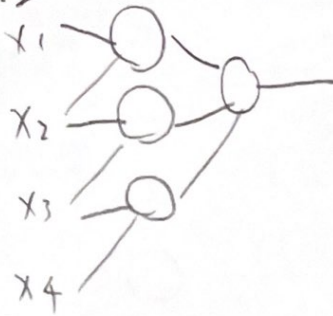


8.2



8.1

$$(a) \quad 4 \times 3 + \min(3, 4 \times 3) + \min(3, 4)$$

$$= 18$$

(b)

$$3 + 4 + 4 = 11$$

(c)

(a) 18 rows

(b)

11 rows

(d)

$$(a) \quad 18/2 = 9 \text{ (rows)} \#$$

$$(b) \quad 11/2 = 5.5$$

5 (rows) #

8.4

WAV file size = 176 KB/s from Internet

Image size = 1 MB

Eye can watch 24 frame/s

I was born in 1999/12/11

time elapse ≈ 764500000 (s)

$$7645 \times 10^5 \times (10^6 \times 24 + 176 \times 100) \times 8$$

$$= 147860416 \times 10^9$$

$$= 1.47860416 \times 10^{17}$$

$$10^{17} \times 10^3 \times 2 = 2 \times 10^{14}$$

My brain is full

Shakespeare's works contain 884421 words

average word length ≈ 5

each character bit information ≈ 1.6 bit

$$884421 \times 5 \times 1.6 = 7675368 = 7.675368 \times 10^6$$

I can memorize Shakespeare's works