[직접 계산]

Repeat 1

e = 0.08, w의 변화율= (0.02, 0.032, 0.008) w = (0.42, 0.732, 0.808)

Repeat 2

e = 0.0428, w의 변화율= (0.0107, 0.01712, 0.00428) w = (0.4307, 0.74912, 0.81228)

Repeat 3

e = 0.022898, w의 변화율= (0.0057245, 0.0091592, 0.0022898) w = (0.4364245, 0.7582792, 0.8145698)

Repeat 4

e = 0.01225043, w의 변화율= (0.00306261, 0.00490017, 0.00122504) w = (0.43948711, 0.76317937, 0.81579484)

Repeat 5

e = 0.00655398, w의 변화율= (0.0016385, 0.00262159, 0.0006554) w = (0.44112561, 0.76580096, 0.0.81645024)

[코드로 계산]

**Source code :**

|  |
| --- |
| // source code 의 폰트는 Courier10 BT Bold으로 하시오  import numpy as np  def delta\_rule():  alpha=0.5  x = np.array([0.5, 0.8, 0.2])  w = np.array([0.4, 0.7, 0.8])  d = 1  for i in range(5):  v = np.sum(x \* w)  e = d - v # 에러  print(f"Repeat{i+1}")  print(f"error = {e}")  print(f"delta w = ({alpha \* e \* 0.5},{alpha \* e \* 0.8},{alpha \* e \* 0.2})")  print(f"w = ({w[0] + alpha \* e \* 0.5},{w[1] + alpha \* e \* 0.8},{w[2] + alpha \* e \* 0.2})")  print()  w = w + alpha \* e \* x  delta\_rule() |

**실행화면 캡쳐:**

