

KNN	Maths	CS	Result
2	4	3	P
3	6	7	P
4	8	8	P
5	8	8	P

$x = (\text{maths} = 6, \text{CS} = 8)$ and $k = 3$

The classification of pass or fail

Soln:

Distance formula:

$$x_2 = 6 \\ y_2 = 8$$

$$\begin{aligned} D &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(6-4)^2 + (8-3)^2} = \sqrt{4+25} = \sqrt{29} = 5.38 \\ \sqrt{(6-6)^2 + (8-7)^2} &= \sqrt{0+1} = \sqrt{1} = 1 \\ \sqrt{(6-7)^2 + (8-8)^2} &= \sqrt{1+0} = \sqrt{1} = 1 \\ \sqrt{(6-7)^2 + (8-8)^2} &= \sqrt{1+9} = 3.162 \\ &= \sqrt{(6-5)^2 + (8-8)^2} = \sqrt{4+0} = 2 \end{aligned}$$

Hence for $x_m = 0, y_m = 8$ The classification is pass.

3. (5) 1.206 take majority.

For those value find P or F.

1. (2) 1

2. (3) 1

3. (4) 3.162

4. (5) 1.206

5. (6) 2.236

6. (7) 2.236

7. (8) 2.236

8. (9) 2.236

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$$1. \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{(5.2 - 5.3)^2 + (3.1 - 3.1)^2} = \sqrt{0.01 + 0.00} = \sqrt{0.01} = 0.1$$

$$2. \sqrt{(5.2 - 5.1)^2 + (3.1 - 3.0)^2} = \sqrt{0.01 + 0.01} = \sqrt{0.02} = 0.14$$

$$3. \sqrt{(5.2 - 7.2)^2 + (3.1 - 3.0)^2} = \sqrt{(-2)^2 + 0.1^2} = \sqrt{4 + 0.01} = \sqrt{4.01}$$

$$\boxed{\textcircled{3}} \Rightarrow 2.00$$

$$4. \sqrt{(5.2 - 5.4)^2 + (3.1 - 3.4)^2} = \sqrt{(-0.2)^2 + (-0.3)^2} = \sqrt{0.04 + 0.09} = \sqrt{0.13}$$

$$\boxed{\textcircled{4}} \Rightarrow 0.36$$

$$5. \sqrt{(5.2 - 5.1)^2 + (3.1 - 3.3)^2} = \sqrt{(0.1)^2 + (-0.2)^2} = \sqrt{0.01 + 0.04} = \sqrt{0.05}$$

$$6. \sqrt{(5.2 - 5.4)^2 + (3.1 - 3.9)^2} = \sqrt{(-0.2)^2 + (-0.8)^2} = \sqrt{0.04 + 0.64} = \sqrt{0.68}$$

$$7. \sqrt{(5.2 - 7.4)^2 + (3.1 - 2.8)^2} = \sqrt{(-2.2)^2 + 0.3^2} = \sqrt{4.84 + 0.09} = 2.22$$

$$8. \sqrt{(5.2 - 6.1)^2 + (3.1 - 2.8)^2} = \sqrt{(-0.9)^2 + 0.3^2} = \sqrt{0.81 + 0.09} = \sqrt{0.9}$$

$$\boxed{\textcircled{5}} \Rightarrow 0.448$$

$$9. \sqrt{(5.2 - 7.3)^2 + (3.1 - 2.9)^2} = \sqrt{(-2.1)^2 + 0.2^2} = \sqrt{4.41 + 0.04} = \sqrt{4.45}$$

$$10. \sqrt{(5.2 - 6.0)^2 + (3.1 - 2.7)^2} = \sqrt{(-0.8)^2 + (-0.4)^2} = \sqrt{0.64 + 0.16} = \sqrt{0.80} = 0.894$$

$$11. \sqrt{(5.2 - 5.8)^2 + (3.1 - 2.8)^2}$$

$$\boxed{11 \Rightarrow 0.6708}$$

$$12. \sqrt{(5.2 - 6.3)^2 + (3.1 - 2.3)^2} \quad \boxed{12 \Rightarrow 1.3607}$$

$$13. \sqrt{(5.2 - 5.1)^2 + (3.1 - 2.5)^2} \quad \boxed{13 \Rightarrow 0.608}$$

$$14. \sqrt{(5.2 - 5.3)^2 + (3.1 - 2.5)^2} \quad \boxed{14 \Rightarrow 1.2529}$$

$$15. \sqrt{(5.2 - 5.5)^2 + (3.1 - 2.4)^2} \quad \boxed{15 \Rightarrow 0.761}$$

From Results

Distance Ramle.

①

0.608

②

0.707

③

2.002

④

0.3605

⑤

0.2236

⑥

0.8246

⑦

2.2203

⑧

0.948

⑨

2. 1095

⑩

0.8944

⑪

0.6708

⑫

1.3601

⑬

0.608

⑭

1.2529

⑮

0.761

3.400 Height weight class

167

51

Underweight

182

62

Normal

176

69

Overweight

172

65

Obesity

174

56

Underweight

173

58

Normal

170

57

Underweight

171

57

Normal

To find

ht = 170, wt = 57

Class?

$$1. \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$x_2 = 170, y_2 = 57$$

$$(167, 51) \Rightarrow \sqrt{170 - 167} = \sqrt{(170 - 167)^2 + (57 - 51)^2}$$

$$= 6.708 \quad \boxed{5}$$

$$(182, 62) \Rightarrow \sqrt{(182 - 170)^2 + (57 - 62)^2}$$

$$= 13 \quad \boxed{6}$$

$$(176, 69) = \sqrt{(176 - 170)^2 + (57 - 69)^2}$$

$$= 13.476 \quad \boxed{7}$$

Ascending. So Classification

1. $(T_3, b_4) = \sqrt{(170 - 173)^2 + (57 - 64)^2}$

= 7.615

$$(172, 65) = \sqrt{(170 - 172)^2 + (57 - 65)^2}$$

$$= 8.246$$

$$(174, 56) = \sqrt{(170 - 174)^2 + (57 - 56)^2} \\ = 4.123 \quad \text{--- } \textcircled{4}$$

$$(169, 58) = \sqrt{(170 - 169)^2 + (57 - 58)^2} \\ = 1.414 \quad \text{--- } \textcircled{1}$$

$$(173, 57) = \sqrt{(170 - 173)^2 + (57 - 57)^2} \\ = 3 \quad \text{--- } \textcircled{3}$$

$$(170, 55) = \sqrt{(170 - 170)^2 + (57 - 55)^2} \\ = 2 \quad \text{--- } \textcircled{2}$$

The classification result is normal.