	outlook	yes	no	# of instances
1	Sunny	2	3	5
2	Overcast	4	0	4
3	Rain	3	2	5

$$G(\underset{v=\text{sunny}}{\text{outlook}}) = 1 - \sum_{i=1}^{n} P^2(i|t) = 1 - \left[\left(\frac{2}{5}\right)^2 + \left(\frac{3}{5}\right)^2\right] = 0.48 \checkmark$$

$$G(\text{outlook} = \text{overcast}) = 1 - \left[\left(\frac{4}{4}\right)^2 - \left(\frac{0}{4}\right)^2\right] = 0$$

$$G(\text{outlook} = \text{Rain}) = 1 - \left[\left(\frac{3}{5}\right)^2 - \left(\frac{2}{5}\right)^2\right] = 0.48 \checkmark$$

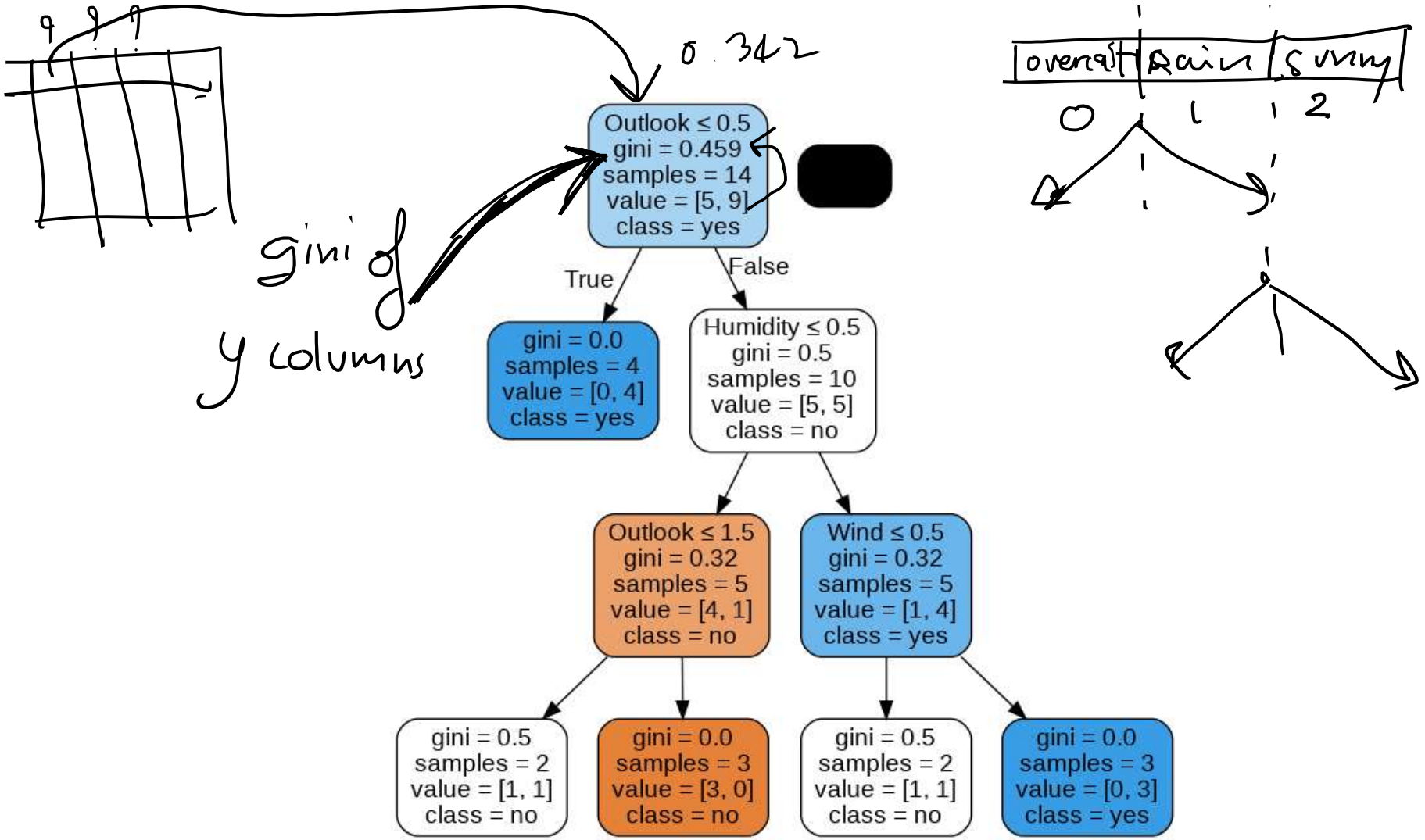
* purity Gini index = 0

G(outlode) = Calculate weighted sum of Gini indexes

$$\left(\frac{5}{14} \times 0.48\right) + \left(\frac{4}{14} \times 0\right) + \left(\frac{5}{14} \times 0.48\right)$$

sunny overcast rain

$= 0.342$


Outlook ≤ 0.5
gini = 0.459
samples = 14
value = [5, 9]
class = yes
True
False
gini = 0.0
samples = 4
value = [0, 4]
class = yes
Humidity ≤ 0.5
gini = 0.5
samples = 10
value = [5, 5]
class = no
Outlook ≤ 1.5
gini = 0.32
samples = 5
value = [4, 1]
class = no
Wind ≤ 0.5
gini = 0.32
samples = 5
value = [1, 4]
class = yes
gini = 0.5
samples = 2
value = [1, 1]
class = no
gini = 0.0
samples = 3
value = [3, 0]
class = no
gini = 0.5
samples = 2
value = [1, 1]
class = no
gini = 0.0
samples = 3
value = [0, 3]
class = yes