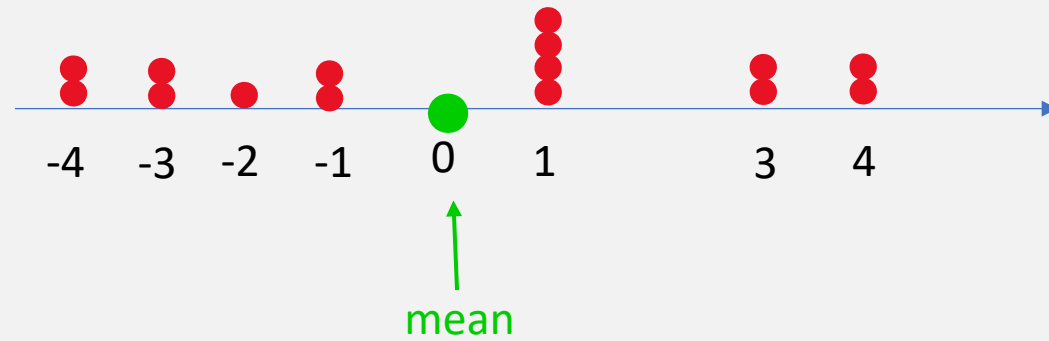


# Measures of Central Tendency

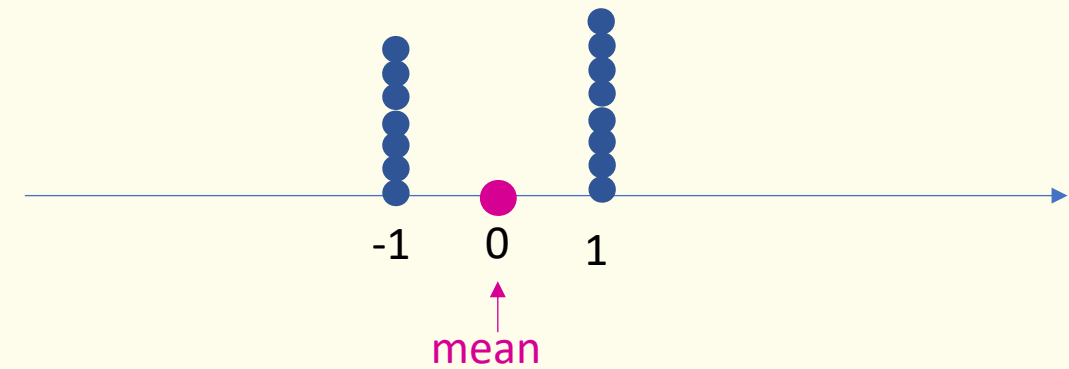
$v = [-4, -4, -3, -3, -2, -1, -1, 1, 1, 1, 1, 3, 3, 4, 4]$

$mean(v) = 0, \quad median = 1$

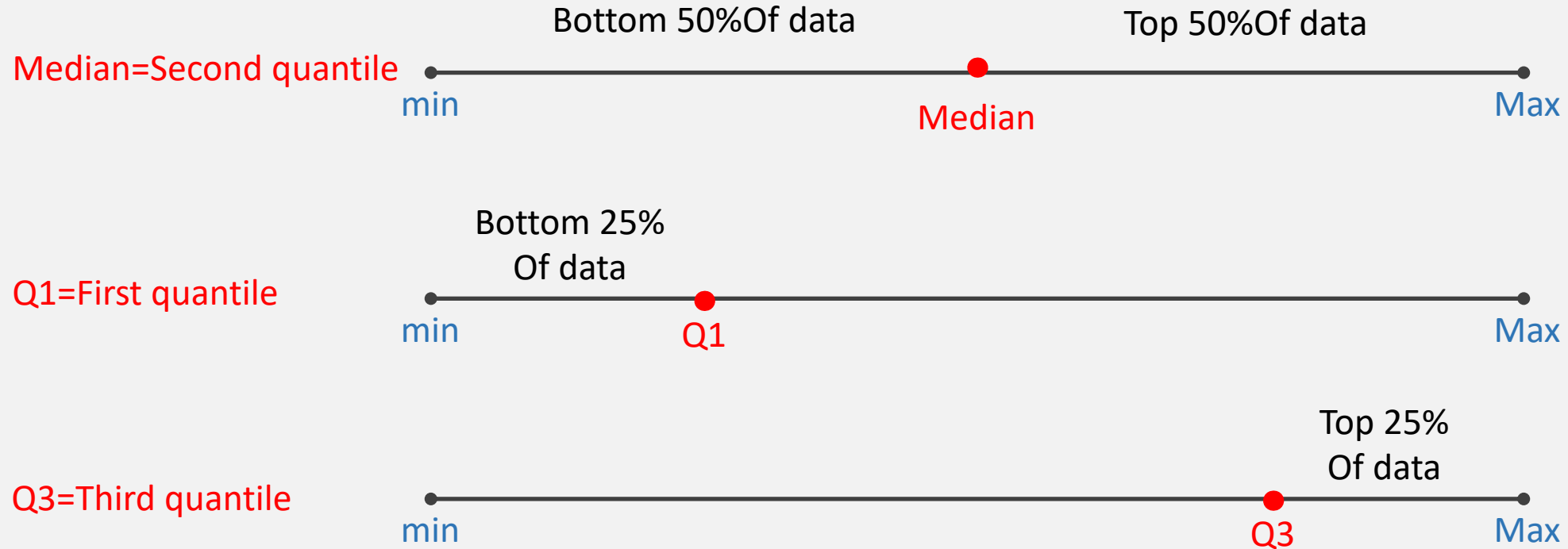


$w = [-1, -1, -1, -1, -1, -1, -1, 1, 1, 1, 1, 1, 1, 1, 1]$

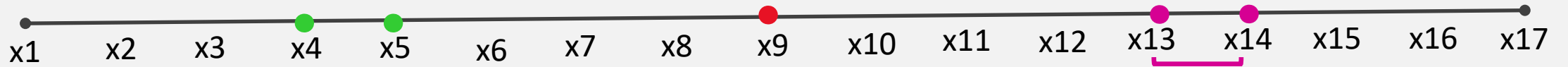
$mean(w) = 0, \quad median(w) = 1$



# Quantiles



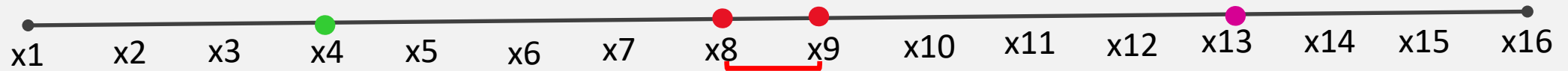
# Quantiles



$$Q1 = (x_4 + x_5) / 2$$

$$\text{Median} = x_9$$

$$Q3 = (x_{13} + x_{14}) / 2$$

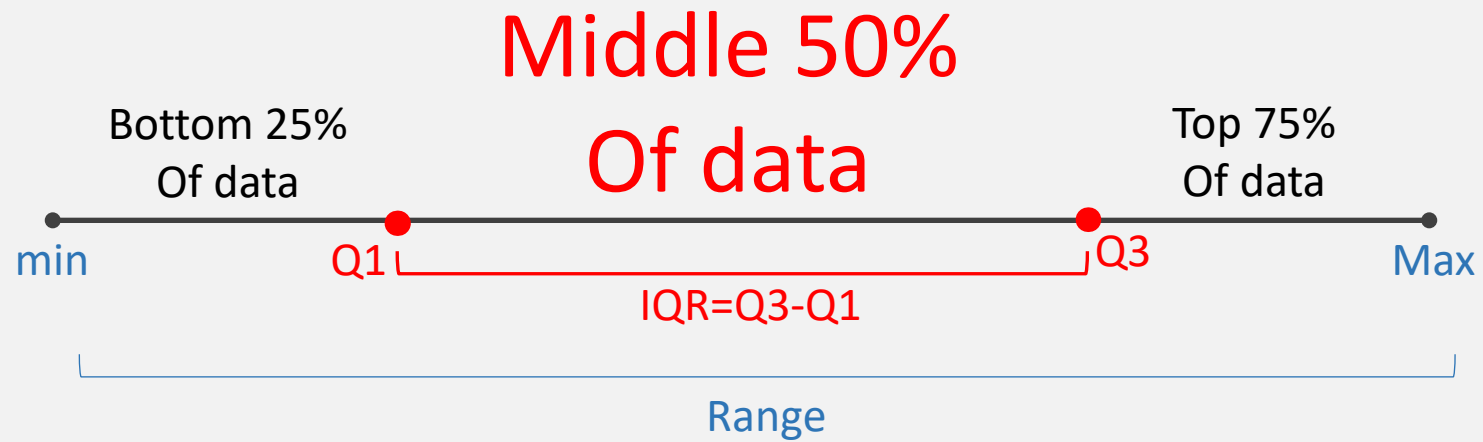


$$Q1 = x_4$$

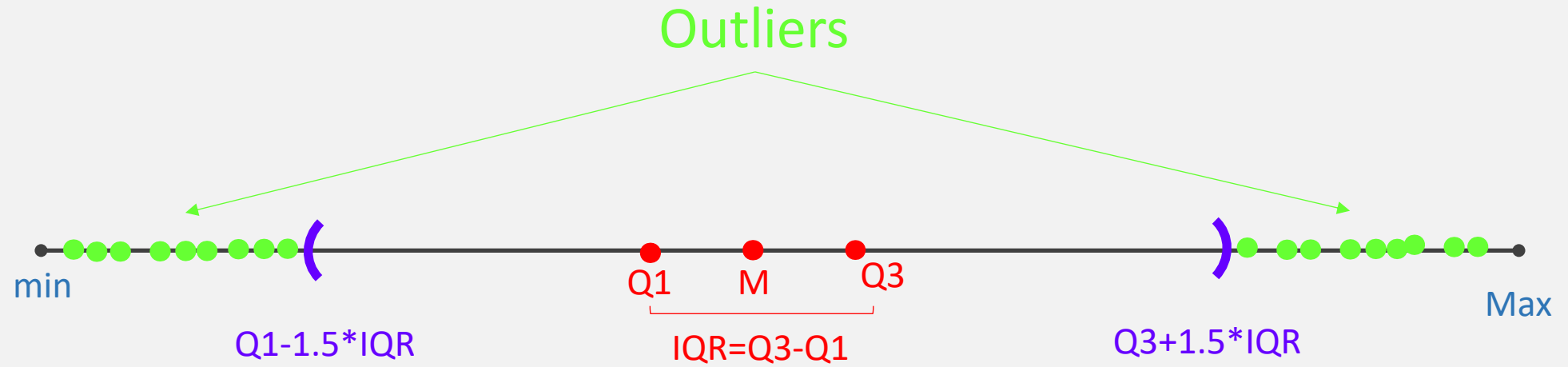
$$\text{Median} = (x_8 + x_9) / 2$$

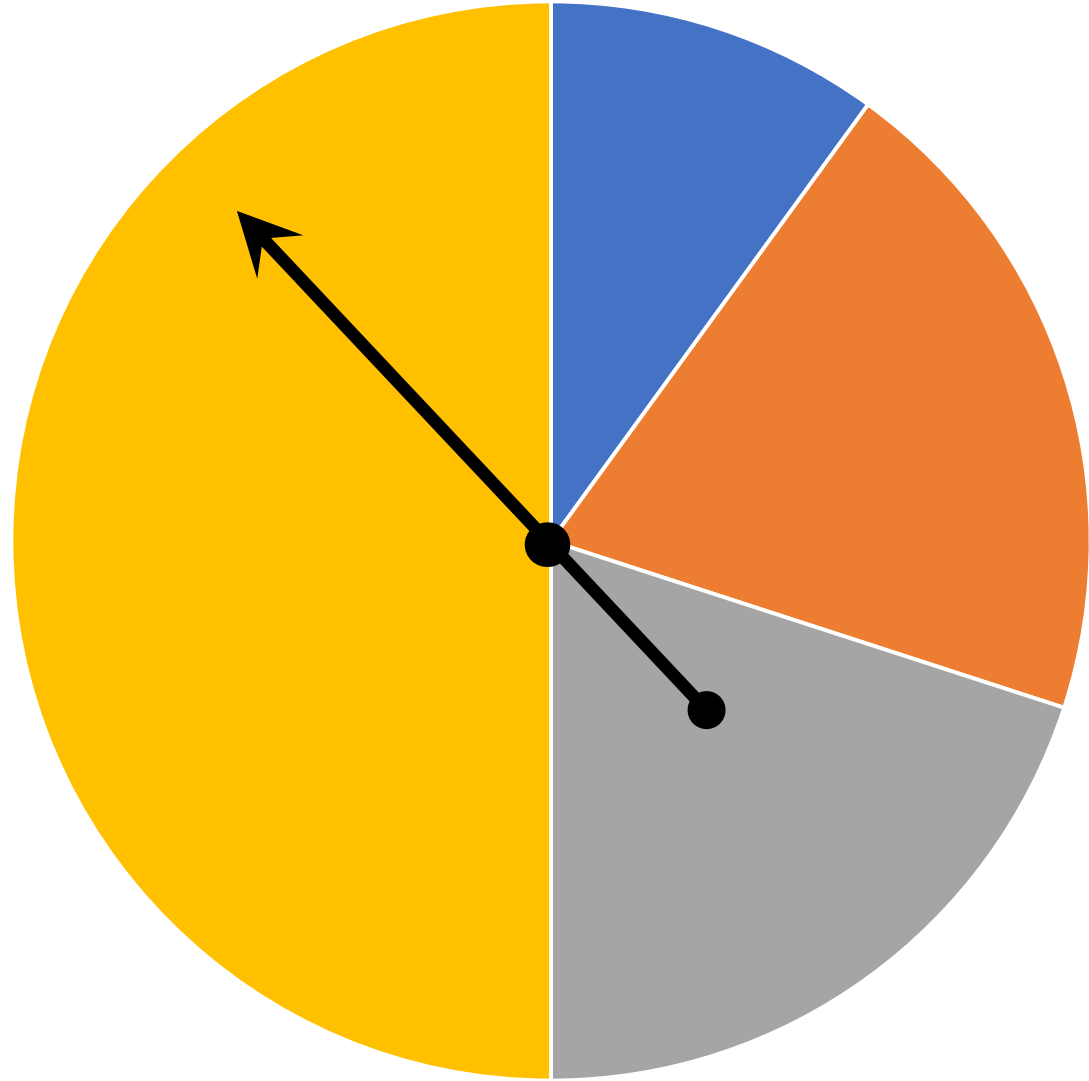
$$Q3 = x_{13}$$

# Interquartile Range (IQR)



# Outliers





Highest Level of Education Attained	Probability
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Below high school	0.063
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Some high school	0.085
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High school degree	0.322
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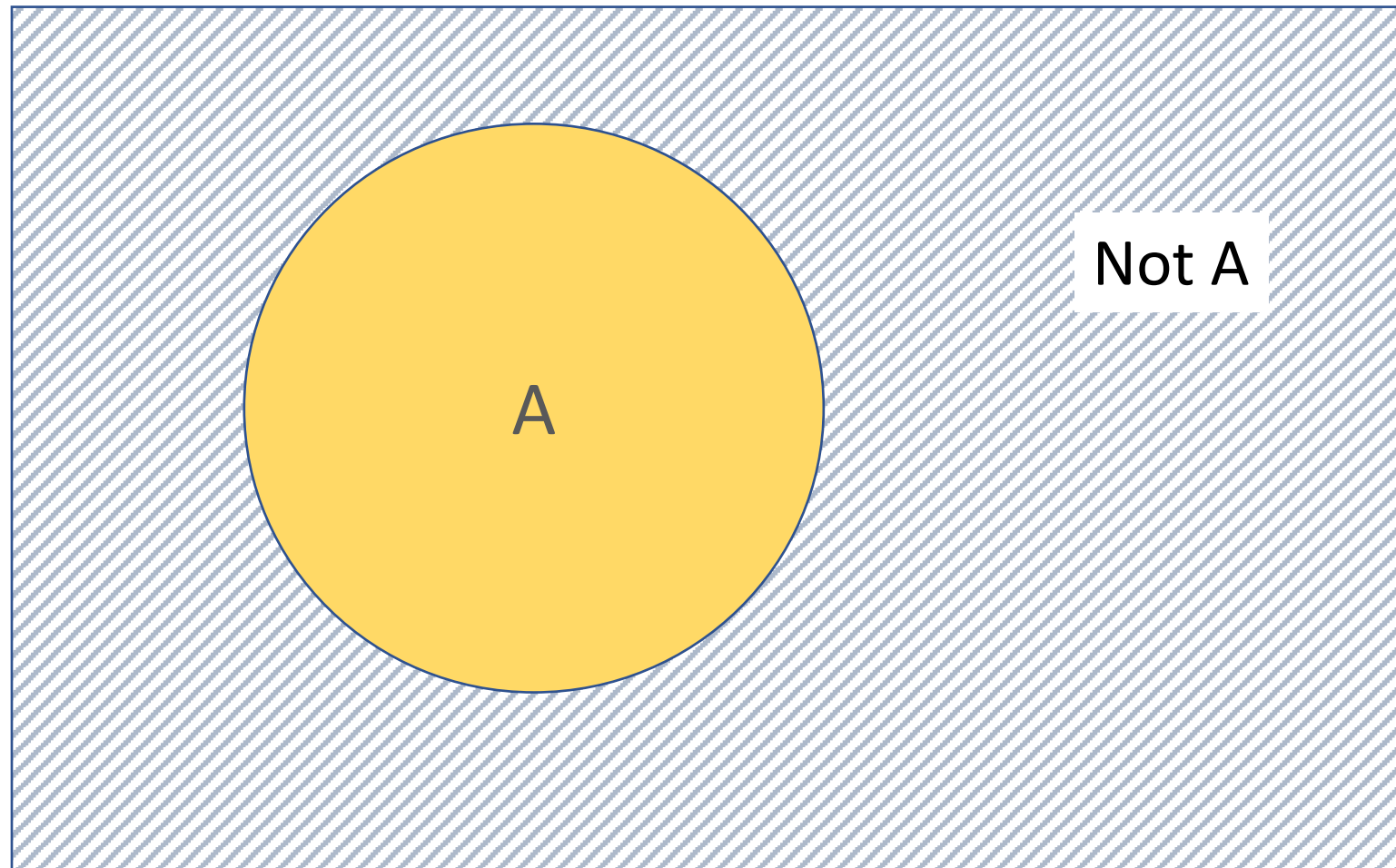
Some college	0.168
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College degree	0.181
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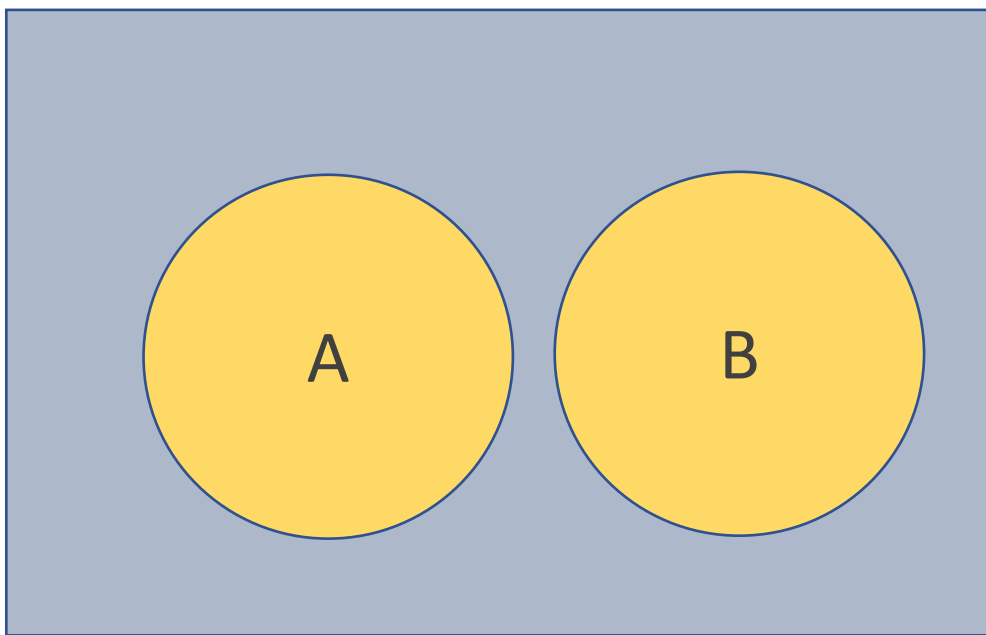
Graduate or professional degree	0.095
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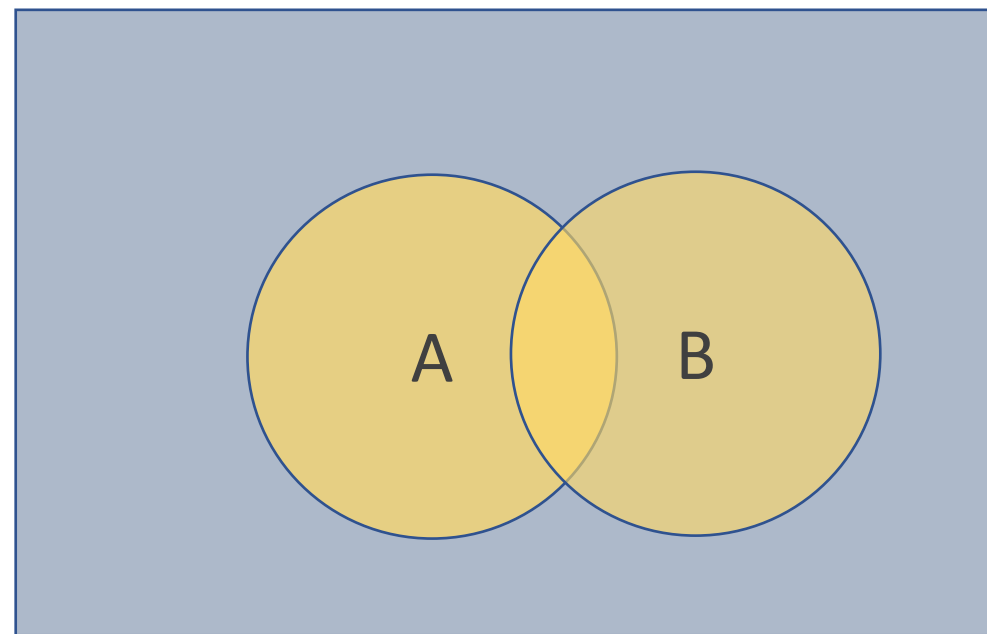
S



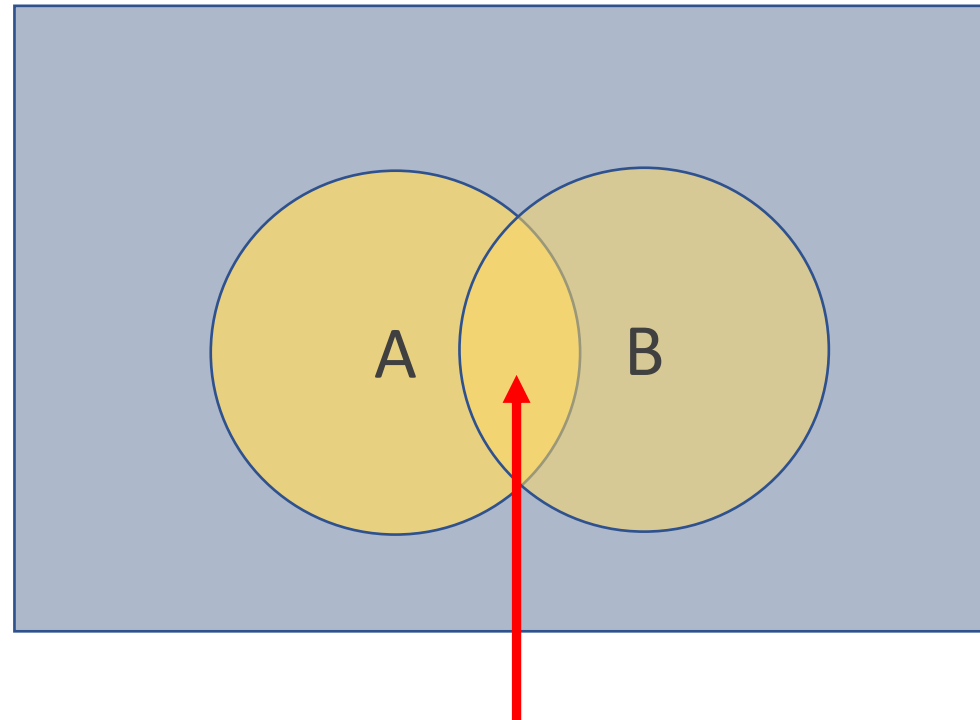
Mutually Exclusive



Non-Mutually Exclusive



## Non-Mutually Exclusive



A and B

	B	not B	Total
A	0.75	0.15	0.90
not A	0.05	0.05	0.10
Total	0.80	0.20	1.00

Distribution Plot

