

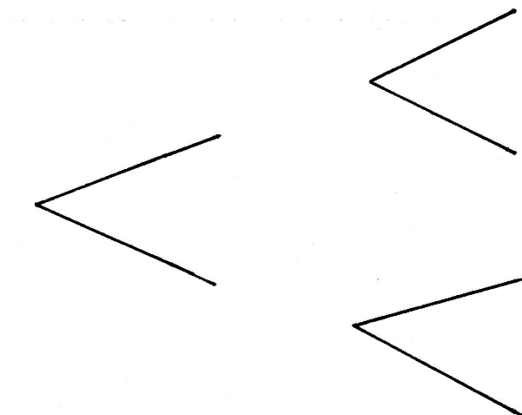
Auf dem Weihnachtsmarkt

Bedingte Wahrscheinlichkeit, Abhängigkeit, (Inverses) Baumdiagramm, Vierfeldertafel.



Behauptung: „Frauen gefällt der Weihnachtsmarkt eher als Männern.“

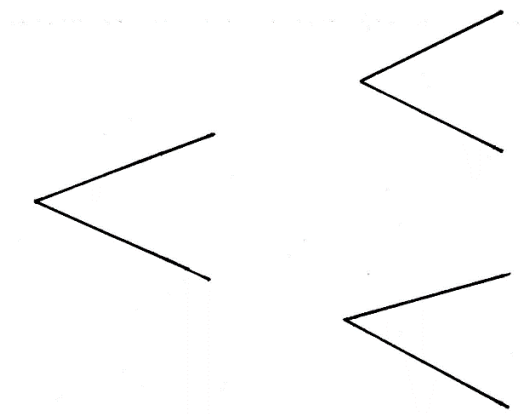
Baumdiagramm:



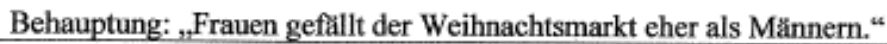
Vierfeldertafel

Prüfe auf Abhängigkeit:

Inverses Baumdiagramm:



Bedingte Wahrscheinlichkeit, Abhängigkeit, (Inverses) Baumdiagramm, Vierfeldertafel.



$$P(\sigma) = \frac{3}{5}$$

$$P(\sigma \cap +) = \frac{1}{5}$$

$$P(\sigma \cap -) = \frac{2}{5}$$

$$P(\phi) = \frac{2}{5}$$

$$P(\phi \cap +) = \frac{1}{5}$$

$$P(\phi \cap -) = \frac{1}{5}$$

	$\odot^{\circ}$	$\odot^+$	Σ
+	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{2}{5}$
-	$\frac{2}{5}$	$\frac{1}{5}$	$\frac{3}{5}$
Σ	$\frac{3}{5}$	$\frac{2}{5}$	1

$$P_{\theta}(-) = \frac{P(\theta^n -)}{P(\theta^n)}$$

unabhängig wenn $P_E(F) = P(F)$ $\frac{3}{5} \neq \frac{1}{3}$
abhängig wenn $P_E(F) \neq P(F)$

Inverses Baumdiagramm:

The diagram shows a tree structure for the inverse probabilities. The root node splits into two branches: a top branch labeled $P(+) = \frac{2}{5}$ and a bottom branch labeled $P(-) = \frac{3}{5}$. From the top branch, a second level splits into a right branch labeled $P_+(♂) = \frac{1}{2}$ leading to $♂ \cdot P(+ \cap ♂)$ and a left branch labeled $P_+(♀) = \frac{1}{2}$ leading to $♀ \cdot P(+ \cap ♀)$. From the bottom branch, a second level splits into a right branch labeled $P_-(♂) = \frac{2}{3}$ leading to $♂ \cdot P(- \cap ♂)$ and a left branch labeled $P_-(♀) = \frac{1}{3}$ leading to $♀ \cdot P(- \cap ♀)$.

$P_+(♂) = \frac{P(+ \cap ♂)}{P(+)} = \frac{\frac{1}{5}}{\frac{2}{5}} = \frac{1}{2}$

$P_-(♂) = \frac{P(- \cap ♂)}{P(-)} = \frac{\frac{2}{15}}{\frac{3}{5}} = \frac{2}{9}$