explanation

Allister Mounsey

27 February 2019

Contents

Let:

D = WindDir at 9am/3pm or whenever that is relevant

R = There is Rain Tomorrow

Then:

$$P(R/D) = \frac{P(D/R).P(R)}{P(D)} \tag{1}$$

We seek those instances where:

$$P(R/D) \geq P(R) \tag{2}$$

Substituting for $P(R/D)$ in (2) from (1), we get:

$$\frac{P(D/R).P(R)}{P(D)} \geq P(R) \tag{3}$$

Dividing (3) thru out by $P(R)$ we get:

$$\frac{P(D/R)}{P(D)} \geq 1 \tag{4}$$

Multiplying (4) thru by $P(D)$ we get:

$$P(D/R) \geq P(D) \tag{5}$$

That is (5) is an equivalent of stating the required conditions (2). QED.