$\mathbb{P}(C \mid RS)$

Cloudy $.8 \cdot .1 = .08$ $4/9$

not Cloudy $.2 \cdot .5 = .1$

$\mathbb{P}(C \mid R^c S)$

$.2 \cdot .1 = .02 = \frac{.02}{.42} = .0476$ $\frac{1}{21}$

not cloudy $(1-.8) \cdot .5 = .4 = \frac{.41}{.42} = .9524$

$\mathbb{P}(R \mid CW)$

$.8 \cdot .99 = .792 = \frac{.792}{.972} = .8148$] $\frac{22}{27}$

$.2 \cdot .90 = .18 \quad \frac{.18}{.972} = .1852$

$\mathbb{P}(R \mid C^c W)$

$.2 \cdot .99 = .198 = \frac{.198}{.918} = .2157$ $\frac{11}{51}$

$.8 \cdot .9 = .72 = \frac{.72}{.918} = .784$

$\mathbb{P}(R \mid C W^c)$, .01

$.8 (1-.99) = .008 = \frac{.008}{.028} = .2857$ $\frac{2}{7}$

$.2 \cdot .1 = .02 = \frac{.02}{.028} = .7143$

$\mathbb{P}(R \mid C^c W^c)$

$.2 \cdot .01 = .002 = \frac{.002}{.082} = .0243$ $\frac{1}{41}$

$.8 \cdot .1 = .08 = \frac{.08}{.082} = .9756$