Date:

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$P(G) = 0.3$
$P(B) = 0.5$
$P(O) = 0.2$

$P(FR|G) = 65\% = 0.65$ $\quad P(\neg FR|G) = 0.35 = (1-0.65)$
$P(FR|B) = 82\% = 0.82$ $\quad P(\neg FR|B) = 0.18 = (1-0.82)$
$P(FR|O) = 50\% = 0.50$ $\quad P(\neg FR|O) = 0.50 = (1-0.50).$

FR = First run $\quad$ $\neg FR$ = not first run.

Solution:

$$P(B|FR) = \frac{P(B)\,P(\neg FR|B)}{P(G)\,P(\neg FR|G) + P(B)\,P(\neg FR|B) + P(\neg FR|O)}$$

$$= \frac{0.5(0.18)}{0.3(0.35) + 0.5(0.18) + 0.2(0.5)}$$

$$= \frac{0.09}{0.295}$$

$$\boxed{P(B|\neg FR) = 0.30}$$