

1. Each subcontractor is equally likely to supply the part, so $P(f_i) = \frac{1}{3}$ for $i \in \{1, 2, 3\}$. Conditional probabilities are $P(R|f_i) = P(R^c|f_i) = \frac{1}{2}$ for each supplier f_i .

(a) $P(f_i), P(R|f_i), P(R^c|f_i)$ for $i \in \{1, 2, 3\}$.

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(b) $P(R), P(R^c)$

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(c) $P(f_i|R)$ for $i \in \{1, 2, 3\}$

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2. Each f_i is again equally likely to be the supplier, but

• $P(R|f_1)$ is three times $P(R^c|f_1)$

• $P(R|f_2)$ is twice $P(R^c|f_2)$

• $P(R|f_3) = P(R^c|f_3) = \frac{1}{2}$

(a) $P(f_i), P(R|f_i), P(R^c|f_i)$ for $i \in \{1, 2, 3\}$.

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(b) $P(R), P(R^c)$

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(c) $P(f_i|R)$ for $i \in \{1, 2, 3\}$

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3. $P(f_1) = 0.5$ and $P(f_2) = P(f_3) = 0.25$. The conditionals $P(R|f_i)$ for $i \in \{1, 2, 3\}$ are the same as Case 2.

(a) $P(f_i), P(R|f_i), P(R^c|f_i)$ for $i \in \{1, 2, 3\}$.

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(b) $P(R), P(R^c)$

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(c) $P(f_i|R)$ for $i \in \{1, 2, 3\}$

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