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2. Solution: A

Let  $R$  = event of referral to a specialist

$L$  = event of lab work

We want to find

$$\begin{aligned}P[R \cap L] &= P[R] + P[L] - P[R \cup L] = P[R] + P[L] - 1 + P[\sim(R \cup L)] \\ &= P[R] + P[L] - 1 + P[\sim R \cap \sim L] = 0.30 + 0.40 - 1 + 0.35 = 0.05 .\end{aligned}$$

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