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1. **Suppose a company offers three different delivery methods for their products: standard delivery, express delivery, and same-day delivery**
   60% of customers choose standard delivery, 30% choose express delivery, and 10% choose same-day delivery
   The delivery success rates are 95% for standard delivery, 90% for express delivery, and 85% for same-day delivery
   If a customer's delivery fails, what is the probability that they chose express delivery?

   Jawaban:

   Pengiriman standar : 60% pelanggan, 95% success, 5% failed

   Pengiriman ekspress : 30% pelanggan, 90% success, 10% failed

   Pengiriman sameday : 10% pelanggan, 85% success, 15% failed

   Probability gagal masing2:

   Standard delivery: 0.6 * 0.05 = 0.03

   Express delivery: 0.3 * 0.1 = 0.03

   Sameday delivery: 0.15 * 0.1 = 0.015

   Total: 0.03 + 0.03 + 0.015 = 0.075

   Probability kalau pengiriman yang gagal adalah pengiriman ekspress

   Probability express delivery failed = 0.03 : 0.075 = 0.4 x 100% = 40%

2. **If a medical test is 95% accurate in detecting a disease and 1% of the population has the disease**
   Calculate the probability of having the disease given a positive test result!
   Jawaban:
   Medical test: 95% (0.95) accurate 5% (0.05) non accurate
   Population: 1% (0.01) disease 99% (0.99) healthy
   P(Accurate|Disease) = 0.095 * 0.01 = 0.0095
   P(Non-accurate|Healthy) = 0.99 * 0.05 = 0.0495
   Total = 0.0095 + 0.0495 = 0.059
   Probability positive result positive disease
   Probability positif result and disease : 0.0095 : 0.059 = 0.1610 x 100% = 16.10%