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16004336   AN info N.

$$P(0_e) = 0.2$$
$$P(1_e) = 0.8$$

$$P(0_s \mid 0_e) = 0.9$$
$$P(0_s \mid 1_e) = 0.2$$

a) encontrar. $P(1\mid 0)$ y $P(1\mid 1)$

* $P(1_s \mid 0_e)$

$$1 = P(1_s \mid 0_e) + P(0_s \mid 0_e)$$
$$1 - P(0_s \mid 0_e) = P(1_s \mid 0_e)$$
$$1 - 0.9 = P(1_s \mid 0_e)$$
$$0.1 = P(1_s \mid 0_e)$$

D

* $P(1_s \mid 1_e)$

$$1 = P(1_s \mid 1_e) + P(0_s \mid 1_e)$$
$$1 - P(0_s \mid 1_e) = P(1_s \mid 1_e)$$
$$1 - 0.2 = P(1_s \mid 1_e)$$
$$0.8 = P(1_s \mid 1_e)$$

b).

$$P(1_s) = P(1_s | 0_e) P(0_e) + P(1_s | 1_e) P(1_e)$$
$$P(1_s) = (0.1 * 0.2) + (0.8 * 0.8)$$
$$P(1_s) = 0.66$$

c) $P(0_s | 0_e) = \dfrac{P(0_s | 0_e) P(0_e)}{P(0_s)} =$

$$P(0_s) = P(0_s | 0_e) P(0_e) + P(0_s | 1_e) P(1_e)$$
$$P(0_s) = (0.9 * 0.2) + (0.2 * 0.8)$$
$$P(0_s) = 0.34$$

$$P(0_s | 0_e) = \dfrac{(0.9 * 0.2)}{0.34}$$

$$P(0_s | 0_e) = 0.5294$$