1. 
$$P(+g, +a, +b, +s)$$
  
=  $P(+g) \cdot P(+a|+g) \cdot P(+b) \cdot P(+s|+b, +a)$   
=  $0.1 \times 1.0 \times 0.4 \times 1.0$   
=  $0.04$   
2.  $P(+a)$ 

(3) 
$$P(+a|+b)$$
  
=  $P(+a)$  ::, A \(\mathbb{B}\).

$$\frac{P(+a|+s,+b)}{P(+a,+b,+s) + P(-a,+b,+s)}$$

$$= P(+a) \cdot P(+b) \cdot P(+s|-a,+b)$$

$$P(+a) \cdot P(+b) \cdot P(+s|+a+b) + [P(-a) \cdot P(+b) \cdot P(+s|-a,+b)]$$

$$= \frac{0.19 \times 0.4 \times 1.0}{[0.19 \times 0.4 \times 1.0] + [(1-0.19) \times 0.4 \times 0.8]} = \frac{0.076}{0.076 + (0.81 \times 0.32)}$$

# (day 34 19)

$$= \frac{0.076}{0.076 + 0.2592} = \frac{0.076}{0.3352} = 0.22673031$$

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(5) 
$$P(+g|+a) = P(+g) \cdot P(+a|+g)$$

$$P(+g) \cdot P(+a|+g) + [P(-g) \cdot P(+a|-g)]$$

$$= 0.1 \times 0.1 \times 0.0 \times 0.1$$

$$[0.1 \times 1.0] + [0.9 \times 0.1]$$

$$= 0.1$$

$$0.1 + 0.09$$

$$= 0.52631579$$

6 
$$P(+g|+b) =$$
  
=  $P(+g)$  ::,  $Q \perp \!\!\! \perp \!\!\! \mid B$ .

$$= 0.1$$

P(+9/15)+16)

P(+4,+6,+5)+P(-4,+6,+5)

0.1 x 9.0 x 81.0

P(+0). P(+0). P(+51-9,+6) (P(+6). P(+6). P(+6). P(+6). P(+6)]

[ [ 10 x 1 . 0 x (P1.0-1)] + [ 3.1 x 1.0 x P1.0]