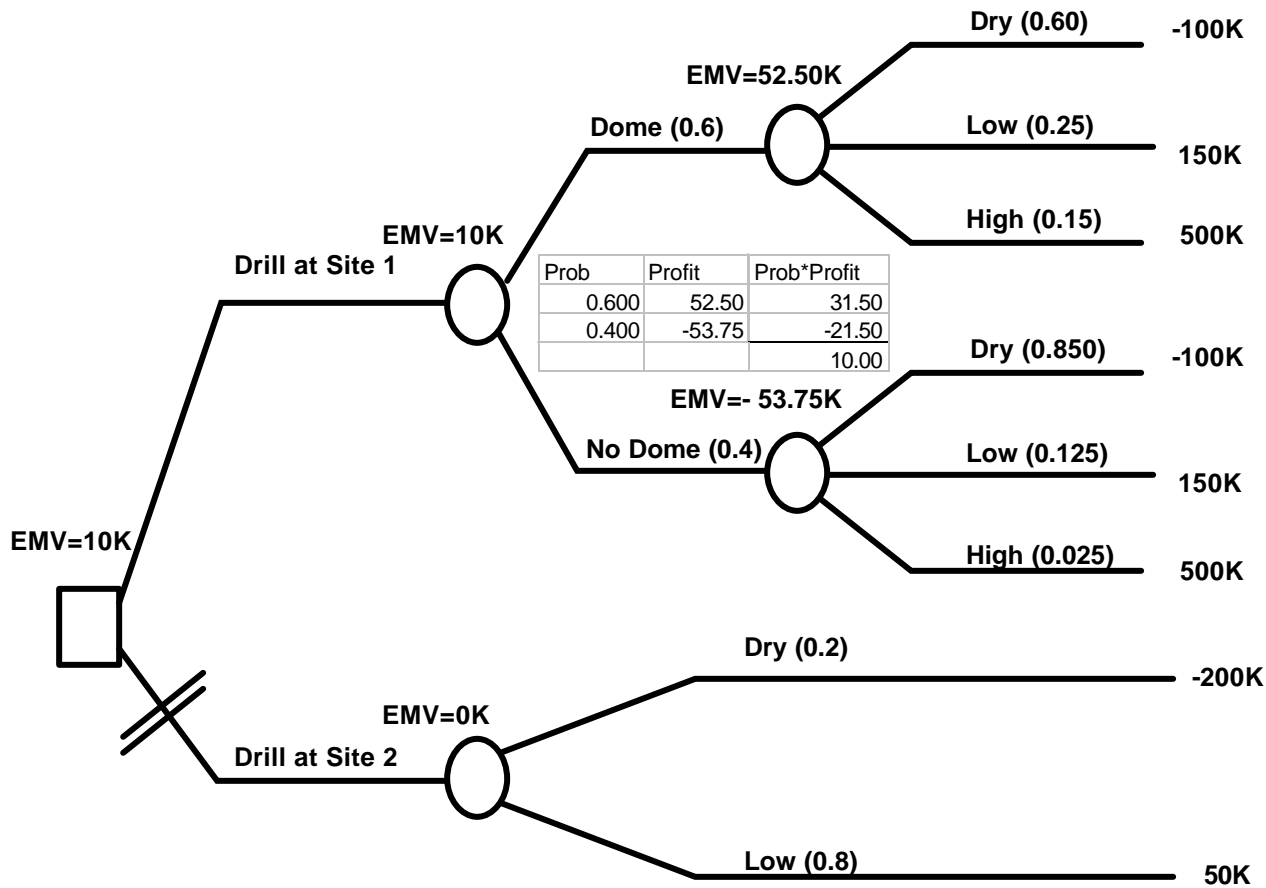


QUESTION 7.32

Max Profit



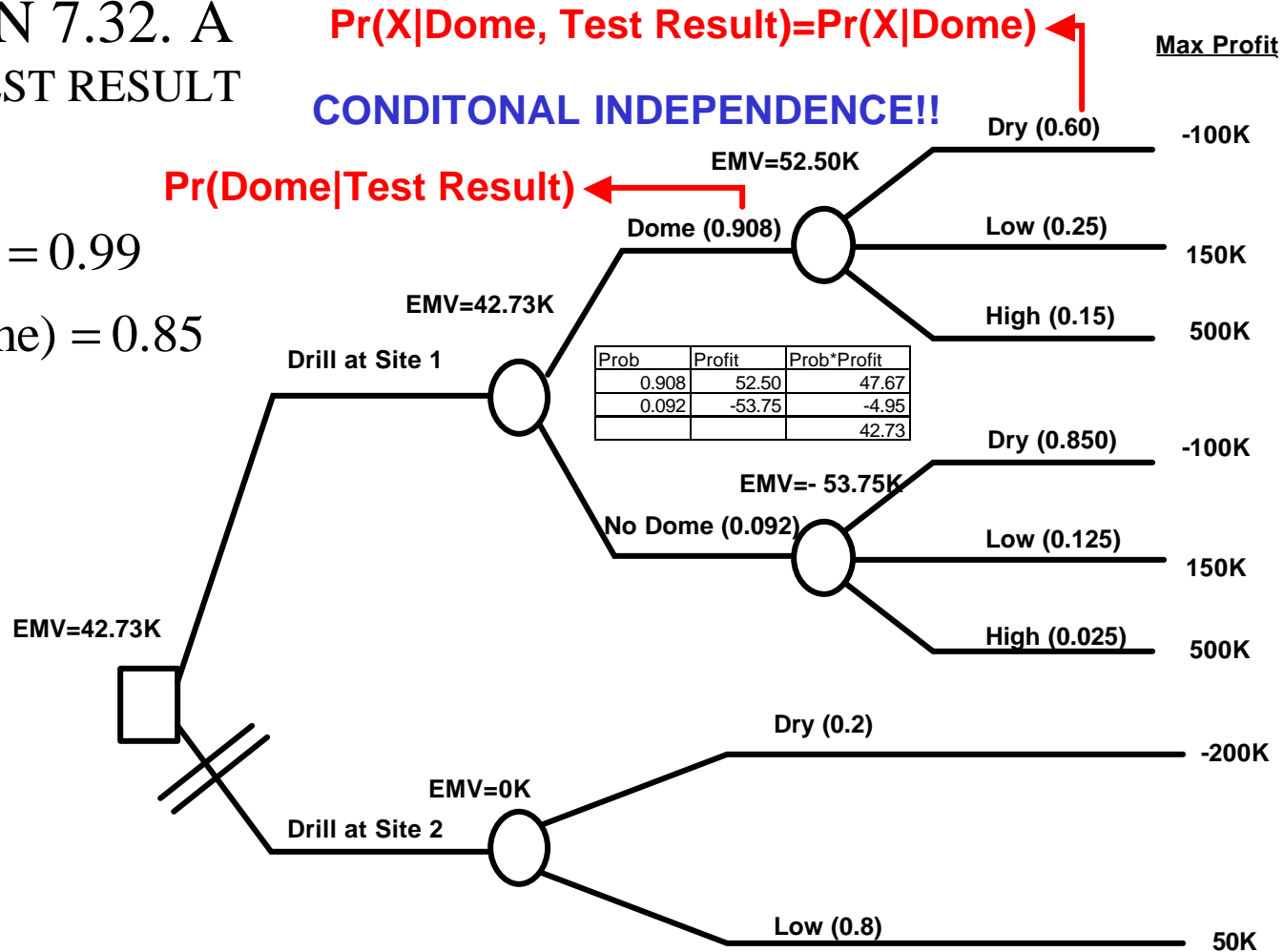
Prob	Profit	Prob*Profit
0.600	-100.00	-60.00
0.250	150.00	37.50
0.150	500.00	75.00
		52.50

Prob	Profit	Prob*Profit
0.850	-100.00	-85.00
0.125	150.00	18.75
0.025	500.00	12.50
		-53.75

Prob	Profit	Prob*Profit
0.200	-200.00	-40.00
0.800	50.00	40.00
		0.00

QUESTION 7.32. A
POSITIVE TEST RESULT

$P(+ | \text{Dome}) = 0.99$
 $P(- | \text{No Dome}) = 0.85$



$$P(\text{Dome} | +) = \frac{P(+ | \text{Dome})P(\text{Dome})}{P(+ | \text{Dome})P(\text{Dome}) + P(+ | \text{No Dome})P(\text{No Dome})}$$

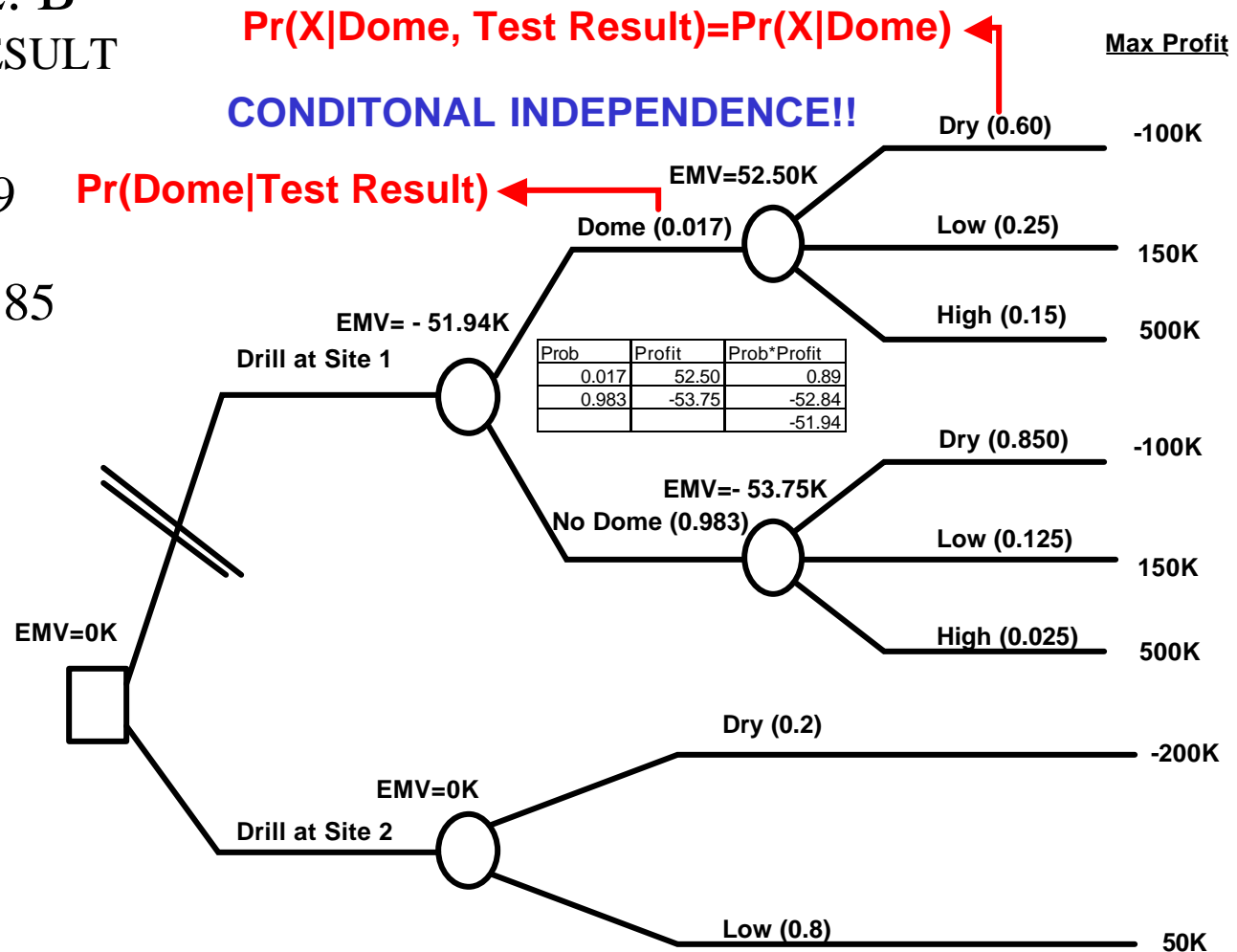
$$= \frac{0.99 \cdot 0.60}{0.99 \cdot 0.60 + (1 - 0.85) \cdot 0.40} = 0.908$$

QUESTION 7.32. B

NEGATIVE TEST RESULT

$$P(+ | Dome) = 0.99$$

$$P(- | No Dome) = 0.85$$



$$P(\text{Dome} | -) = \frac{P(- | \text{Dome})P(\text{Dome})}{P(- | \text{Dome})P(\text{Dome}) + P(- | \text{No Dome})P(\text{No Dome})}$$

$$= \frac{(1 - 0.99) \cdot 0.60}{(1 - 0.99) \cdot 0.60 + 0.85 \cdot 0.40} = 0.017$$