2) MARGINAL PROBABILITY

GIVEN:

$P(OBESITY\_FAM = YES) = 0,817622$ (OF)

NOBESITY (N)		
INSUFFICIENT_WEIGHT	0,1288489	IW
NORMAL_WEIGHT	0,1359545	NW
OBESITY_TYPE_I	0,1662719	OT1
OBESITY_TYPE_II	0,1406916	OT2
OBESITY_TYPE_III	0,1534818	OT3
OVERWEIGHT_LEVEL_I	0,1373757	OL1
OVERWEIGHT_LEVEL_II	0,1373757	OL2

$$P(N \mid OF = YES) = \frac{P(N, OF = YES)}{P(OF = YES)} = \frac{P(N, OF = YES)}{0,817622}$$

$P(N = IW, OF = YES) = 0$

$P(N = NW, OF = YES) = 0$

GIVEN FROM THE CONTEXT OF DATA

$P(N = OT1, OF = YES) = 0,1662719 \cdot 0,817622 = 0,1359317$

$P(N = OT2, OF = YES) = 0,1406916 \cdot 0,817622 = 0,1150145$

$P(N = OT3, OF = YES) = 0,1534818 \cdot 0,817622 = 0,1255832$

$P(N = OL1, OF = YES) = 0,1373757 \cdot 0,817622 = 0,1123712$

$P(N = OL2, OF = YES) = 0,1373757 \cdot 0,817622 = 0,1123712$