Bayes Theorem

Mach1: 30 wrenches / hr
Mach2: 20 wrenches / hr
Out of all produced parts:
We can SEE that 1% are defective
Out of all defective parts:
We can SEE that 50% came from mach1
And 50% came from mach2
Question:
What is the probability that a part
produced by mach2 is defective = ?

-> $P(Mach2) = 20/50 = 0.4$
-> $P(Defect) = 1\%$
-> $P(Mach2 \mid Defect) = 50\%$
-> $P(Defect \mid Mach2) = ?$

$$P(Defect \mid Mach2) = \frac{0.5 \quad * \quad 0.01}{0.4}$$

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