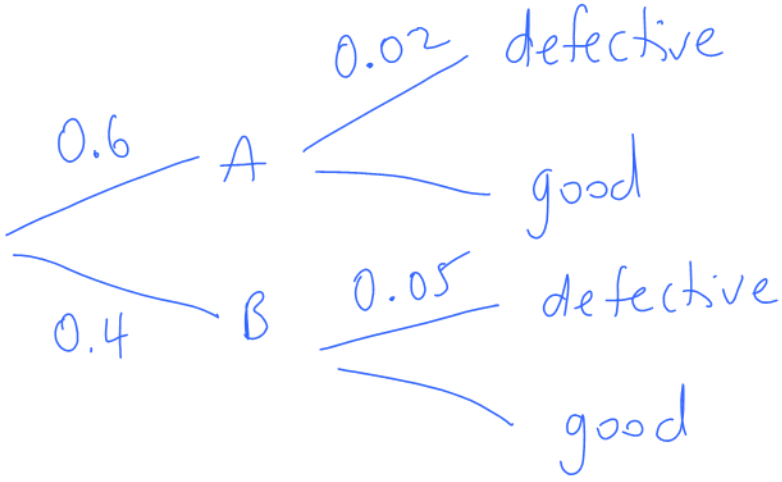
Name:_____

A factory has two machines. Machine A produces 60% of all items, and Machine B produces 40% of all items. Of the items produced by Machine A, 2% are defective. Of the items produced by Machine B, 5% are defective. Find the probability that a defective item is produced by Machine B.

given




$$Pr(B \mid \text{defective}) = \frac{Pr(B \text{ and defective})}{Pr(\text{defective})}$$

$$= \frac{0.4(0.05)}{[0.6(0.02) + 0.4(0.05)]}$$

$$= 0.625$$