

EX Suppose three junior high schools feed into one high school. Junior High  $A$ ,  $B$ , and  $C$  are comprised of 56%, 46%, and 100% female students, respectively. At the high school, 40%, 42%, and 18% of the students come from schools  $A$ ,  $B$ , and  $C$ , respectively. If a student from the high school is randomly selected,

(a). Sketch a tree diagram of the possible outcomes.

(b). Add the probabilities associated with each branch of your tree diagram. Clearly indicate what probability they represent (e.g.,  $P(A)$ ,  $P(M|A)$ , etc.).

(c). Find the probability that the student is a female from school  $A$ .

(d). Find the probability that the student is a female.

(e). Suppose we that the selected student is female, find the probability that she came from

(a) School *A*.

(b) School *B*.

(c) School *C*.