

- 1** Juan goes to college each day by any one of car or bus or walking. The probability that he goes by car is 0.2, the probability that he goes by bus is 0.45 and the probability that he walks is 0.35. When Juan goes by car, the probability that he arrives early is 0.6. When he goes by bus, the probability that he arrives early is 0.1. When he walks he always arrives early.

**(a)** Draw a fully labelled tree diagram to represent this information. [2]

**(b)** Find the probability that Juan goes to college by car given that he arrives early. [4]

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