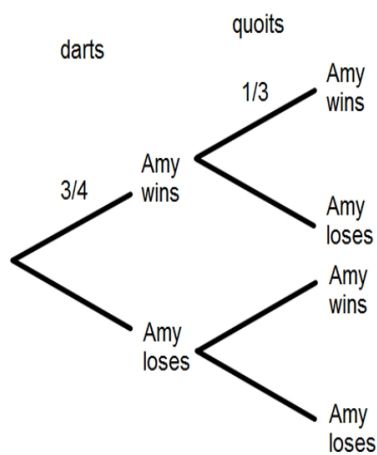


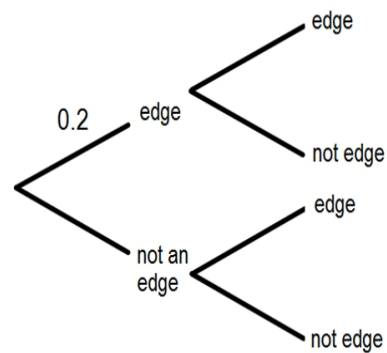
probability, tree diagrams, picking with replacement (or independent events)

- (1) over quite a lot of games against her brother, Amy wins at darts quite often : $\frac{3}{4}$ of the games
she is not so good at quoits where she only wins $\frac{1}{3}$ of the games



- (a) complete the tree diagram
(b) calculate a probability for her winning exactly one of the games when they next play both games
(c) if they played both darts then quoits 54 times, work out how many times you would expect Amy to lose at darts and then lose at quoits

- (2) if a normal matchbox is dropped onto a table, experiments show that it lands on an edge with a probability of 0.2
Joseph drops two such matchboxes



- (a) complete the tree diagram
(b) calculate the probability of exactly one of the (two) boxes landing on an edge
(c) what is the probability of them not both landing on an edge?