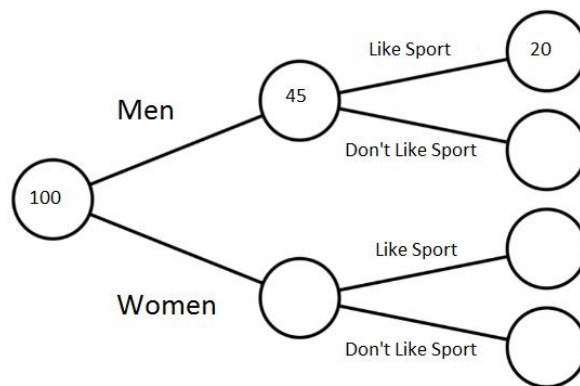


**Frequency Trees 1** [www.m4ths.com](http://www.m4ths.com)

(1) There are 100 people in an office. 45 are men and the rest are women. 20 of the men like sport and the rest of the men don't. 28 of the women like sport and the rest don't.

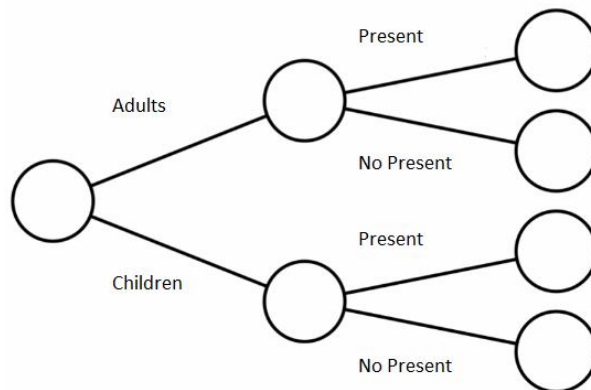
The frequency tree shows some of this information below.



- (a) Complete the frequency tree above.
- (b) One person is chosen at random. Find the probability that the person is a woman who didn't like sport.
- (c) A man is chosen at random. What is the probability that he liked sport?

(2) There are 80 people at a party. 20 of the people are adults and the rest are children. Of the children 45 take a present and the rest don't. Of the adults, all but one take a present.

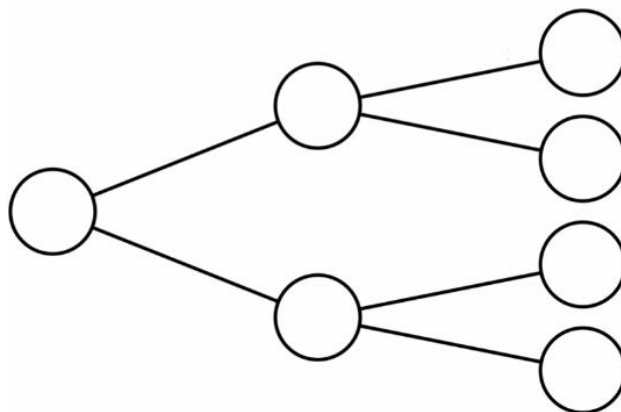
(a) Complete the frequency tree below



- (b) What proportion of the people at the party are adults who have taken a present?
- (c) One person is chosen at random. Find the probability that they were an adult who didn't take a present.

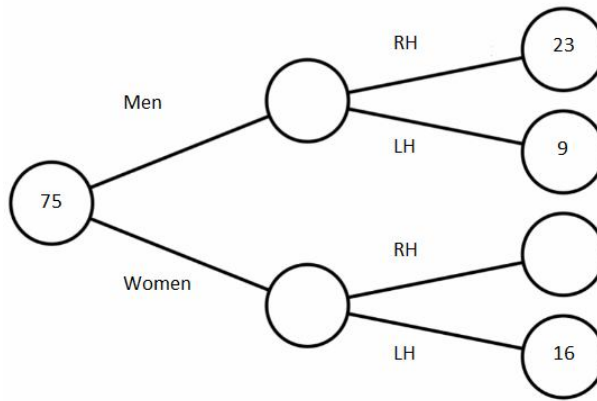
(3) In a box there are pink toys and black toys. There are 90 toys in total. Half of the toys are pink and half of the toys are black. Of the pink toys 20 are plastic and the rest are metal. Of the black toys 10 are plastic and the rest are metal.

(a) Label and complete the frequency tree below.



- (b) How many more metal toys were there than plastic toys?
- (c) One toy is chosen at random. Find the probability that it's a black plastic toy.
- (d) Write down the ratio of pink toys to black toys.

(4) Complete the frequency tree below



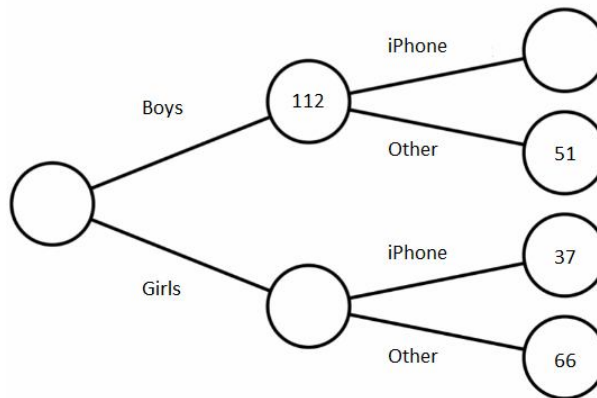
(5) There are 90 people at a party. 36 are adults and the rest are children. Of the children 10 take a drink and the rest don't. Of the adults 16 take a drink and the rest don't.

Draw a frequency tree to show this information.

(6) In Y10 there are 250 students. 130 are boys and the rest are girls. 50 boys take pack lunches and 80 girls take pack lunches. Those that don't take pack lunches eat in the canteen. Draw a frequency tree to represent the information.

(7) The frequency tree below shows what phone some students at a school owned.

(a) Complete the frequency tree.



(b) One person is chosen at random. Find the probability of the person being a boy with an iPhone.

(c) A girl is chosen at random. Find the probability that she doesn't own an iPhone.

(d) How many more people own 'Other' phones than iPhones?

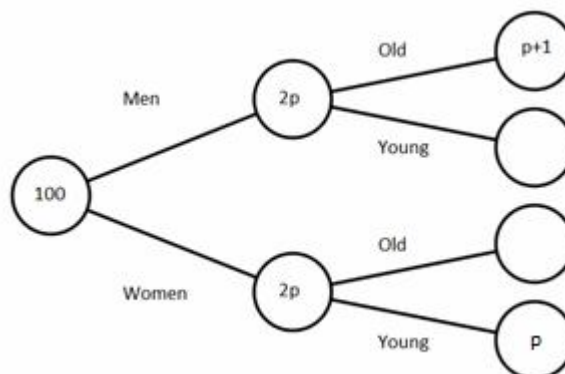
(8) There are 180 people at a party. 1/3 are men and the rest are women. Of the men half take food and the rest don't. Of the women 20% take food and the rest don't.

(a) Show this information in a frequency tree.

(b) One person is chosen at random. Find the probability that the person is a man who doesn't take food.

(c) A woman is chosen at random. Find the probability that she takes food.

(9) (a) Find the value of  $p$  in the frequency tree below.



(b) Complete the frequency tree.