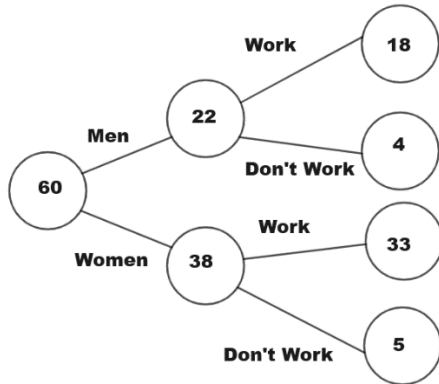


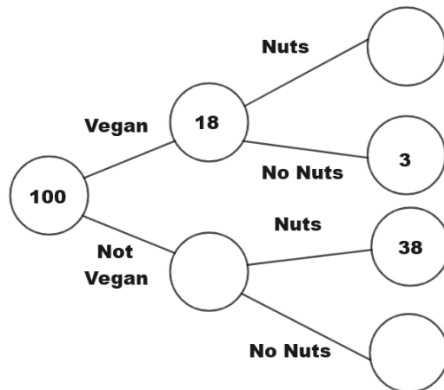
**Frequency Trees – www.m4ths.com – Steve B!**

(1) Some people at a shopping centre were asked if they worked or not. The people asked were either men or women. The frequency tree below shows the results of the survey.



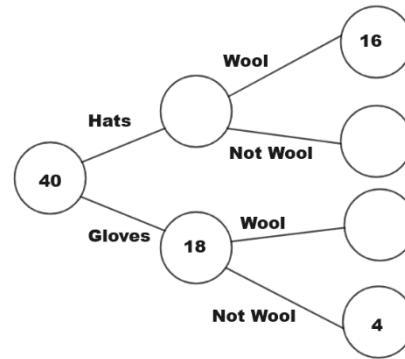
- (a) How many people were surveyed?
- (b) How many people surveyed were men?
- (c) How many were women who worked?
- (d) How many people didn't work?

(2) A shop sells some foods that are vegan and some that aren't. The foods either have nuts in or don't have nuts in. The frequency tree shows information about the foods below.



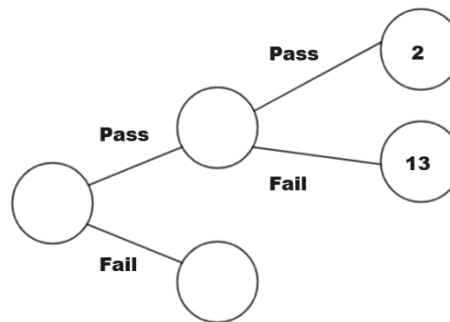
Complete the frequency tree.

(3) An outdoors shop has a selection of gloves and hats for sale. The gloves and hats are either made from wool or not. The frequency tree shows some information below.



- (a) Use the frequency tree to find the number of hats that were not made from wool.
- (b) What proportion of the gloves were wool?
- (c) One item was chosen at random. What is the probability that it was a wool hat?

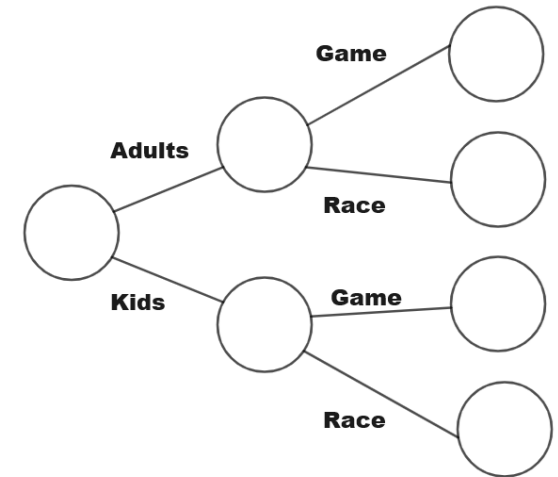
(4) A maths class of 32 students is given a challenge. If they pass the first challenge they take a second challenge. If they fail the first challenge they go no further.



- (a) Complete the frequency tree.
- (b) What % of students failed at least one of the challenges?

(5) At a village fete there are 70 different activities to do. 80% of the activities are for kids and the rest are for adults. The activities are either races or games. 3 of the adult activities are games and 20 of the kid activities are races.

(a) Complete the frequency tree below.

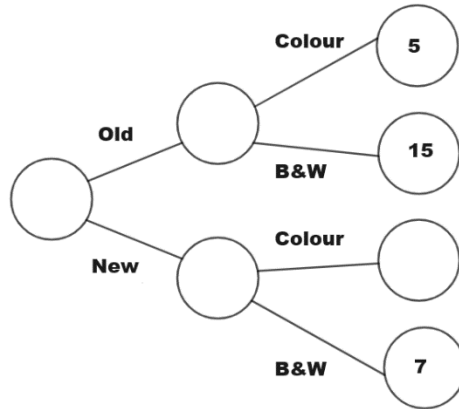


- (b) One activity is chosen at random. Find P(adult race).
- (c) One of the kid activities is chosen at random. Find P(game).
- (d) What % of the activities are adult games?
- (e) What is the ratio of games to races?
- (f) 10 more kid activities are now added at the fete. What % of the activities are now for kids?

(6) In a toy box there are 40 fabric toys and 26 plastic toys. 12 of the plastic toys are red and 18 of the fabric toys are not red. Draw a fully labelled frequency tree to show this information.

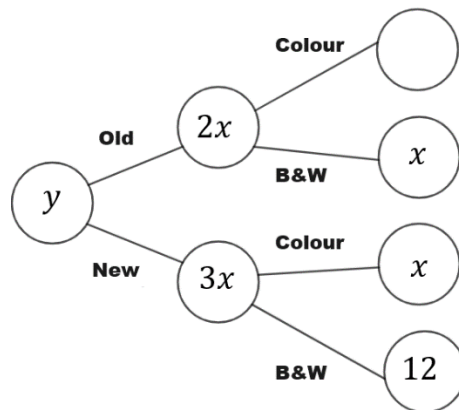
(7) John has a collection of photos. Some of the photos are old and some are new. Some of the photos are colour and some are black and white.  $\frac{1}{4}$  of the photos are old photos.

(a) Complete the frequency tree below.



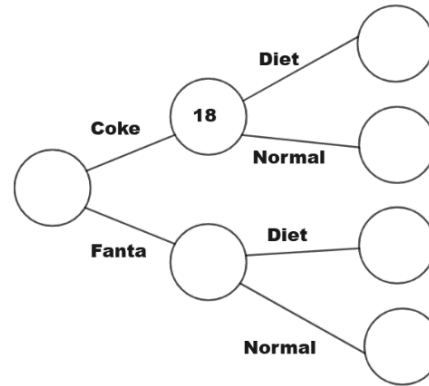
- (b) One new photo is chosen at random. What is the probability that it is a colour photo?
- (c) One photo is chosen at random, find P(black and white photo)
- (d) What proportion of the old photos are colour?

(8) Martin also has some photos. Use the diagram below to find out how many he has.



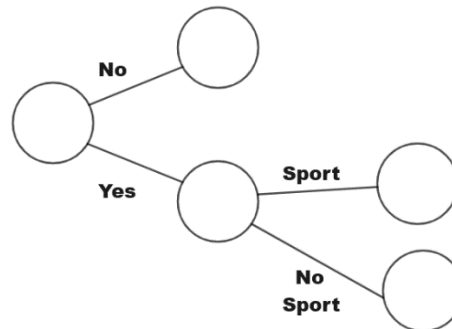
(9) People at a party were offered either Coke or Fanta to drink. They could pick diet or normal for each drink. Two thirds of the Coke drinkers chose diet Coke. There were 20 people who chose a diet drink and 14 chose a normal drink.

(a) Complete the frequency tree below.

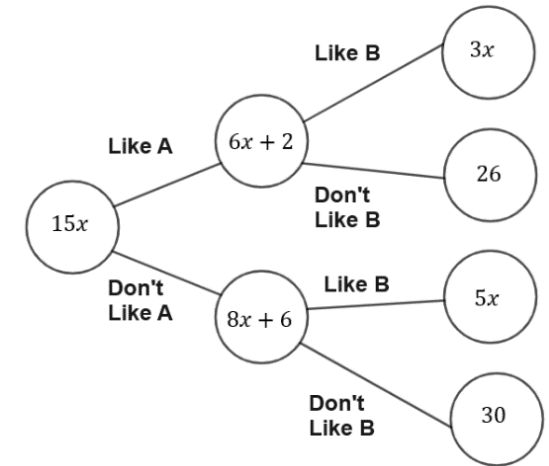


- (b) Which was the least popular drink?
- (c) What fraction of the Fanta drinkers chose normal Fanta?

(10) At a school there were 180 students in a year group. They were asked if they wanted to go on a school trip. 55% of the students wanted to go and also wanted to play sport on the trip. 5% of the students wanted to go on the trip but not play sport. Complete the frequency tree below.



(11) Some people were asked if they like A and if they liked B. The frequency tree below shows some information about their answers.



How many more people didn't like A than liked A?

(12) People in a survey were asked two questions. The first was answered with either Yes or No, the second with either A or B. The ratio of people answering No to Yes was 2:1.  $\frac{1}{9}$  of the people in the survey people chose A for the second question.  $\frac{7}{8}$  of the people **who chose No then** chose B. Complete the frequency tree below.

