

Name:

Result:

1. *(5 points)*

In a certain population 20% of people are over 1.8 metres tall. If a person is over 1.8 metres tall, the probability that this person weighs more than 80 kg is 75%. If a person is not over 1.8 metres tall, then the probability that this person weighs more than 80 kg is p .

(a) Represent the above information on a tree diagram. [1]

In this population 39% of people weigh more than 80 kg.

(b) Calculate the value of p . [2]

A person is selected at random from this population. This person weighs more than 80 kg.

(c) Find the probability that this person is more than 1.8 metres tall. [2]

2.*(5 points)*

A group of 20 adults took part in a survey about social media. Of these 20 adults: 15 had a Facebook account and 7 had an X (former Twitter) account. 4 had neither Facebook nor X account.

(a) Represent the above information on a Venn diagram. [1]

(b) A person from this group is chosen at random. Find the probability that this person has an X account, given that she has an account on exactly one of the platforms mentioned. [2]

(c) Two people are selected from this group at random. Find the probability that they both have accounts on both platforms. [2]