1. Solve for $x$:

$$\sqrt{6x + 7} - (2x - 7) = 0 \tag{1}$$

2. There are 100 cards in a bag on which numbers from 1 to 100 are written. A card is taken out from the bag at ran dom. Find the probability that the number on the selected card

   (a) is divisible by 9 and is a perfect square.

   (b) is a prime number greater than 80.

3. A motor boat whose speed is $24km/hr$ in still water takes 1 hour more to go $32km$ upstream than to return downstream to the same spot. Find th e speed of the stream.

4. Two pipes running together can fill a tank in $11c19$ minutes. If one pipe takes 5 minutes more than the o ther to fill the tank separately, find the time in which each p ipe would fill the tank separately.