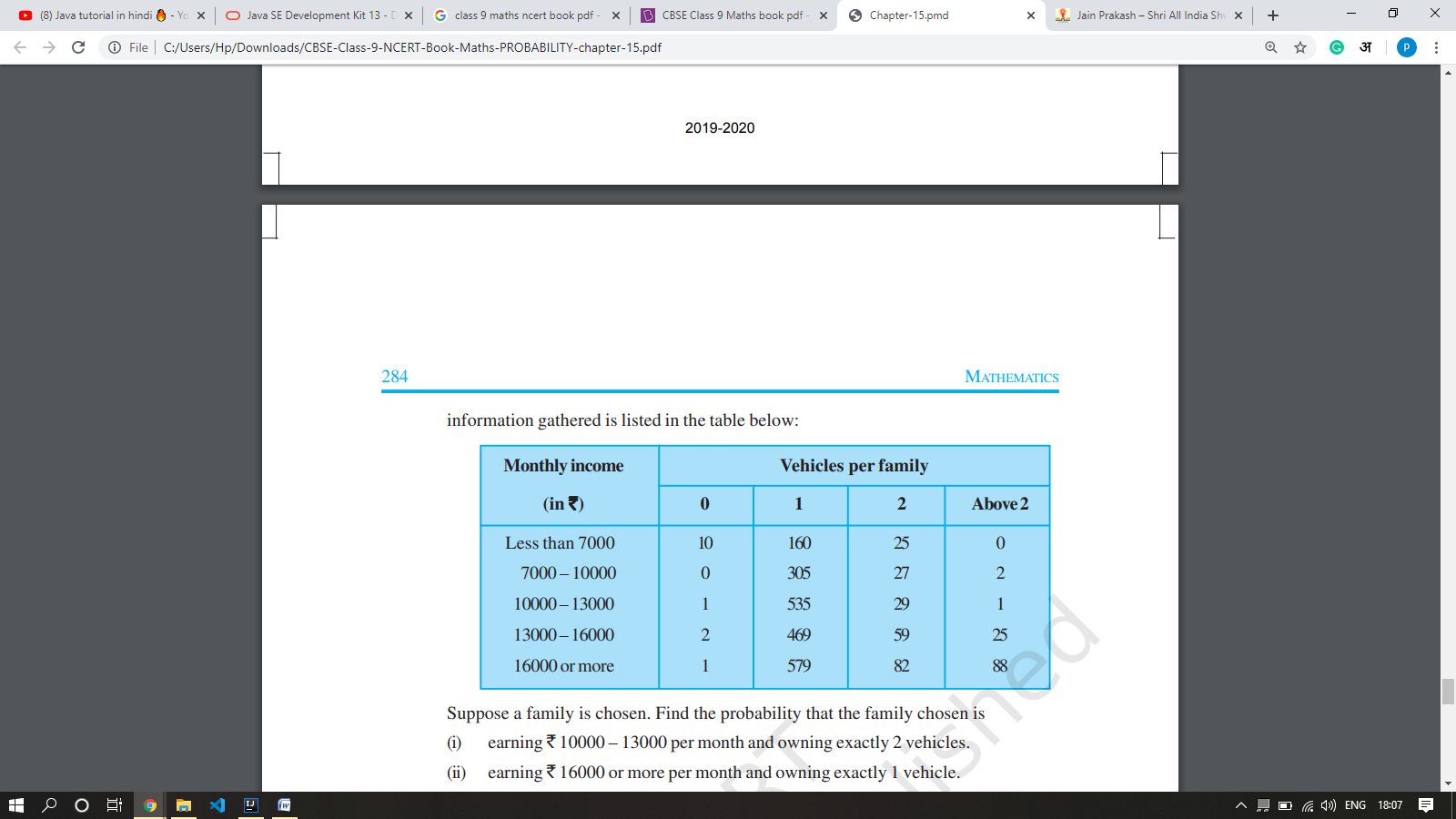
**Mathematics (Chapter – 1,15)**

( Attempt All Questions. )

1. Simplify :
2. .
3. Rationalise the denminator of the following:
4. Represent on the number line.
5. Simplify each of the following expressions:
6. Multiply by
7. Divide by
8. Check whether , , , , are irrational numbers or not.
9. Express the following in the form , where p and q are integers and q ≠ 0.
10. Find an irrational number between and
11. Express 3.142678 in the form , where p and q are integers and q ≠ 0.
12. Find the decimal expansions of , and
13. Show how can be represented on the number line
14. Eleven bags of wheat flour, each marked 5 kg, actually contained the following weights of flour (in kg): 4.97, 5.05, 5.08, 5.03, 5.00, 5.06, 5.08, 4.98, 5.04, 5.07, 5.00. Find the probability that any of these bags chosen at random contains more than 5 kg of flour.
15. In a cricket match, a batswoman hits a boundary 6 times out of 30 balls she plays. Find the probability that she did not hit a boundary
16. An organisation selected 2400 families at random and surveyed them to determine a relationship between income level and the number of vehicles in a family. Theinformation gathered is listed in the table below:



Suppose a family is chosen. Find the probability that the family chosen is

1. earning Rs. 10000 – 13000 per month and owning exactly 2 vehicles
2. earning Rs. 16000 or more per month and owning exactly 1 vehicle.
3. earning less than Rs. 7000 per month and does not own any vehicle
4. earning Rs. 13000 – 16000 per month and owning more than 2 vehicles.
5. owning not more than 1 vehicle