1.] In a random sample of 560 men of age 50-69 years from a town, blood pressure (BP) level and waist hip ratio (WHR) were recorded. A person was defined as hypertensive when systolic BP ≥140 mmHg and diastolic BP ≥90 mmHg. WHR <0.95 cm was considered as normal and ≥0.95 cm as a risk factor. The following data were obtained: Data Table. Estimate the probability that:

i. A randomly selected man of age 50-69 years from this town is hypertensive. Answer: 57.8%

ii. A man with WHR <0.95 is hypertensive. Answer: 36.5%

iii. A man with WHR ≥0.95 is hypertensive. Answer: 31.8%

Waist-hip ratio, Hypertension,

	Present	Absent
>=0.95	74	54
<0.95	158	274
Total	232	328

2.] Birth of a boy is as likely as a girl 50/50

a.) Prob that next two will both be girls? .5 * .5 = 25%

b.) Already have two girls. Prob that next will be girl? 50%

3.] Cancer test has sensitivity, specificity, pos predictivity, and neg predictivity in excess of 90%. Which of the 4 indicators would you use to reassure a patient that the positive result could be in error? Explain why.

Answer: a test with good positive predictivity will be strong in confirming the presence of disease while good negative predictivity will be strong in confirming the absence of disease. Thus, a test result that comes back negative could be reassuring to a patient by discussing the strong negative predictivity inherent in that particular cancer test, showing that the odds of its being negative are 90% or higher.