

Lots of babies Given that a family has four children, which of the following sequences of boys and girls is most likely?

(a) bbbb

(b) bgbg

(c) gggg

Education and Gender The table below shows the distribution of education level attained by US residents by gender based on data collected during the 2010 American Community Survey.

		<i>Gender</i>	
		Male	Female
<i>Highest education attained</i>	Less than 9th grade	0.07	0.13
	9th to 12th grade, no diploma	0.10	0.09
	HS graduate (or equivalent)	0.30	0.20
	Some college, no degree	0.22	0.24
	Associate's degree	0.06	0.08
	Bachelor's degree	0.16	0.17
	Graduate or professional degree	0.09	0.09
Total		1.00	1.00

a What is the probability that a randomly chosen man has at least a Bachelor's degree?

b What is the probability that a randomly chosen woman has at least a Bachelor's degree?

c What is the probability that a man and a woman getting married both have at least a Bachelor's degree? Note any assumptions you must make to answer this question.

d If you made an assumption in part (c), do you think it was reasonable? If you didn't make an assumption, double check your earlier answer and then return to this part.

HIV in Swaziland Swaziland has the highest HIV prevalence in the world: 26% of this country's population is infected with HIV. The ELISA test is one of the first and most accurate tests for HIV. For those who carry HIV, the ELISA test is 99% accurate. For those who do not carry HIV, the test is 93% accurate. If an individual from Swaziland has tested positive, what is the probability that he carries HIV?