

1. A survey was taken and the the number of people in each of the catorgories is given in the table. A person is selected at random. Compute the following probabilities.

$$\text{a) } P(C|G) = \frac{65}{165}$$

$$\text{b) } P(E^C|A) = \frac{15 + 45}{70} = \frac{60}{70}$$

| | A | B | C | total |
|-------|----|-----|-----|-------|
| E | 10 | 20 | 30 | 60 |
| F | 15 | 25 | 35 | 75 |
| G | 45 | 55 | 65 | 165 |
| total | 70 | 100 | 130 | 300 |

2. Use the tree to answer these questions. You do not need to simplify to a decimal answer. These questions will be graded right or wrong so be carefull.

$$\text{(a) } P(T|R) = \frac{\frac{3}{7} * \frac{8}{29}}{\frac{3}{7}} = \frac{8}{29}$$

$$\text{(b) } P(G|Y) = \frac{\frac{4}{7} * \frac{8}{17}}{\frac{3}{7} * \frac{11}{29} + \frac{4}{7} * \frac{8}{17}}$$

$$\text{(c) } P(B) = \frac{3}{7} * \frac{10}{29} + \frac{4}{7} * \frac{3}{17}$$

