**AP Stats WS 4-3 Name:**

**Two Way Tables:**

1. Prior to graduation from high school, the class of 2000 was surveyed about their plans. The table below displays the results for white and minority students. (The “Minority Group included African American, Asian, Hispanic, and Native American students)

|  |  |  |  |
| --- | --- | --- | --- |
|  | White | Minority | Total |
| 4 year college | 198 | 44 |  |
| Two year college | 36 | 6 |  |
| Military | 4 | 1 |  |
| Other | 14 | 3 |  |
| Total |  |  |  |

1. What percent of graduates are white?
2. What percent of graduates are planning on attending a 2-year college?
3. What percent of minority graduates are planning on attending a 2-year college?
4. What percent of graduates planning on attending a 2year college are minorities?
5. The table below describes what Ithaca High School Students did after graduation in 1959, 1970, and 1980

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1959 | 1970 | 1980 | Total |
| Continuing Education | 197 | 388 | 320 |  |
| Employed | 103 | 137 | 98 |  |
| In the Military | 20 | 18 | 18 |  |
| Total |  |  |  |  |

1. What percent of all graduates joined the military?
2. What percent of students graduated in 1970?
3. What percent of 1959 graduates joined the military?
4. Of the students who are employed, how many graduated in 1980?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Tattoo in commercial parlor | Tattoo done elsewhere | No tattoo | Total |
| Has Hepatitis C | 17 | 8 | 18 |  |
| No Hepatitis C | 35 | 53 | 495 |  |
| Total |  |  |  |  |

1. A study at the University of Texas Southwestern Medical Center examined 626 people to see if there was an increased risk of contracting hepatitis C associated with having a tattoo. If the subject had a tattoo, researchers asked whether it had been done at a commercial tattoo parlor or elsewhere
2. Find the marginal Distribution based on whether the subject had Hepatitis C or not
3. Does this situation display independence?
4. The table below shows the number of federal prison inmates serving sentences for various types of offenses in 1990 and 1998. Counts are given in thousands of prisoners

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1990 | 1998 | Total |
| Violent crimes | 10 | 13 |  |
| Property Crimes | 8 | 9 |  |
| Drugs | 30 | 63 |  |
| Public Order | 9 | 22 |  |
| Other | 1 | 2 |  |
| Total |  |  |  |

1. Find the marginal distribution with regards to year
2. What crime/ crimes have increased since 1990 and by what percent?
3. In July 1991 and again in April 2001 the Gallup Poll asked random samples of 1015 adults about their opinions on working parents.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1991 | 2001 | Total |
| Both work full time | 142 | 131 |  |
| One work full time the other part time | 274 | 244 |  |
| One works the other works at home | 152 | 173 |  |
| One works, the other stays home with kids | 396 | 416 |  |
| No opinion | 396 | 416 |  |
| Total |  |  |  |

1. Find the marginal distribution based on the year
2. Do you think people’s attitudes have changed over the past ten years? Explain
3. A Company held a Blood Pressure Screening Clinic for their employees. The results are summarized in the table below by age group and blood pressure level

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Under 30 | 30-49 | Over 50 | Total |
| Low | 27 | 37 | 31 |  |
| Normal | 48 | 91 | 93 |  |
| High | 23 | 51 | 73 |  |
| Total |  |  |  |  |

1. Find the Marginal Distribution based on blood pressure level
2. Looking at the people with High Blood pressure, does age seem to increase your chance of having higher blood pressure? Explain.