**Frequency Tables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Frequency Table | | Has Meningitis | |  |
| Yes | No |  |
| Age Group | Baby | 1 | 0 | 1 |
| Toddler | 3 | 0 | 3 |
| Child | 1 | 2 | 3 |
| Youth | 0 | 1 | 1 |
| Student | 6 | 1 | 7 |
| Adult | 2 | 3 | 5 |
|  |  | 13 | 7 | 20 |
|  |  |  |  |  |
| Frequency Table | | Has Meningitis | |  |
| Yes | No |  |
| Fever | Yes | 8 | 4 | 12 |
| No | 5 | 3 | 8 |
|  |  | 13 | 7 | 20 |
|  |  |  |  |  |
| Frequency Table | | Has Meningitis | |  |
| Yes | No |  |
| Stiff Neck | Yes | 6 | 0 | 6 |
| No | 7 | 7 | 14 |
|  |  | 13 | 7 | 20 |
|  |  |  |  |  |
| Frequency Table | | Has Meningitis | |  |
| Yes | No |  |
| Skin | Normal | 2 | 2 | 4 |
| Rash | 3 | 1 | 4 |
| Blotchy | 2 | 2 | 4 |
| Pale | 4 | 1 | 5 |
| Spots | 2 | 1 | 3 |
|  |  | 13 | 7 | 20 |
|  |  |  |  |  |
| Frequency Table | | Has Meningitis | |  |
| Yes | No |  |
| Headache | Yes | 9 | 3 | 12 |
| No | 4 | 4 | 8 |
|  |  | 13 | 7 | 20 |

**Likelihood Tables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Likelihood Table | | Has Meningitis | |  |
| Yes | No |  |
| Age Group | Baby | 1/13 | 0/7 | 1/20 |
| Toddler | 3/13 | 0/7 | 3/20 |
| Child | 1/13 | 2/7 | 3/20 |
| Youth | 0/13 | 1/7 | 1/20 |
| Student | 6/13 | 1/7 | 7/20 |
| Adult | 2/13 | 3/7 | 5/20 |
|  |  | 13/20 | 7/20 |  |
|  |  |  |  |  |
| Likelihood Table | | Has Meningitis | |  |
| Yes | No |  |
| Fever | Yes | 8/13 | 4/7 | 12/20 |
| No | 5/13 | 3/7 | 8/20 |
|  |  | 13/20 | 7/20 |  |
|  |  |  |  |  |
| Likelihood Table | | Has Meningitis | |  |
| Yes | No |  |
| Stiff Neck | Yes | 6/13 | 0/7 | 6/20 |
| No | 7/13 | 7/7 | 14/20 |
|  |  | 13/20 | 7/20 |  |
|  |  |  |  |  |
| Likelihood Table | | Has Meningitis | |  |
| Yes | No |  |
| Skin | Normal | 2/13 | 2/7 | 4/20 |
| Rash | 3/13 | 1/7 | 5/20 |
| Blotchy | 2/13 | 2/7 | 4/20 |
| Pale | 4/13 | 1/7 | 5/20 |
| Spots | 2/13 | 1/7 | 3/20 |
|  |  | 13/20 | 7/20 |  |
|  |  |  |  |  |
| Likelihood Table | | Has Meningitis | |  |
| Yes | No |  |
| Headache | Yes | 9/13 | 3/7 | 12/20 |
| No | 4/13 | 4/7 | 8/20 |
|  |  | 13/20 | 7/20 |  |

**Probabilities**

Is a CHILD, does NOT have a HEADACHE what is the probability that they have MENINGITIS:

(1/13 \* 4/13 \* 13/20) / (3/20 \* 6/20) = 0.34

Is a TODDLER, has a FEVER and Pale SKIN what is the probability that they have MENINGITIS:

(3/13 \* 8/13 \* 4/13 \* 13/20) / (3/20 \* 12/20 \* 5/20) = 1.26

Has a HEADACHE, FEVER and a Stiff Neck what is the probability that they have MENINGITIS:

(9/13 \* 8/13 \* 6/13 \* 13/20) / (12/20 \* 12/20 \*6/20) = 1.18

Has a HEADACHE, FEVER and a Stiff Neck what is the probability that the Patients does NOT have MENINGITIS:

(3/7 \* 4/7 \* 0/7 \* 7/20) / (12/20 \* 12/20 \* 6/20) = 0