Conditional Probability Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The table below listing employees’ years of service:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Years  | 0-4  | 5-9  | 10-14  | 14+  | Totals  |
| Males  | 12  | 6  | 17  | 21  | 56  |
| Females  | 8  | 9  | 13  | 14  | 44  |
| Totals  | 20  | 15  | 30  | 35  | 100  |

1. What is the probability of randomly selecting a female employee?

1. Given that the employee is male, what is the probability that they have less than 4 years of experience?

1. Given that the employee has between 10 and 14 years of experience, what is the probability that the employee is female?

1. What is the probability of randomly selected an employee with less than 14 years of experience given that they are female?

Given the following table of grades from Mrs. Hardcase’s English classes:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Grades  | A  | B  | C  | D  | F  | Totals  |
| Males  | 12  | 6  | 17  | 14  | 7  | 56  |
| Females  | 8  | 9  | 13  | 8  | 6  | 44  |
| Totals  | 20  | 15  | 30  | 22  | 13  | 100  |

1. What is the probability that a randomly selected student got a A or B?

1. What is the probability that an “A” student is male?

1. What is the probability that if a student was female that they got a passing grade?

1. What is the probability of a male student given that they failed?

Hannah is going to play one badminton match and one tennis match. The probability that she will win the badminton match is  . The probability that she will win the tennis match is  .

1. Draw the probability tree diagram.
2. What is the probability Hannah will win both matches?
3. What is the probability Hannah will win exactly one match?

There are only red marbles and green marbles in a bag. There are 5 red marbles and 3 green marbles. Dwayne takes at random a marble from the bag. He does not put the marble back in the bag. Dwayne takes at random a second marble from the bag.

1. Draw the probability tree diagram.
2. What is the probability Dwayne takes 2 marbles of the same color?

There are 5 red pens, 3 blue pens and 2 green pens in a box. Gary takes at random a pen from the box and gives the pen to his friend. Gary then takes at random another pen from the box.

1. Draw the probability tree diagram.
2. What is the probability Gary takes two blue pens?
3. What is the probability Gary takes two different colored pens?

Here are seven tiles.



Jim takes at random a tile. He does not replace the tile. Jim then takes at random a second tile.

1. Draw the probability tree diagram.
2. What is the probability that both tiles that Jim takes have 1 on them?
3. What is the probability that the number on the second tile is larger than the number on the first tile?