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| Of 400 college students, 120 are enrolled in math, 220 are enrolled in English, and 55 are enrolled in both. | |
| Write the totals in the table. |  |
| Let ***M*** be the event that a college student is enrolled in a math class and let ***E*** be the event that a college student is enrolled in an English class. Write probabilities in correct notation. Calculate each probability to the nearest thousandth. | |
| Find ***P***(***M*** | ***E***). |  |
| Find ***P***(***E*** | ***M***). |  |
| Find ***P***(***E*** | Not ***M***). |  |
| Find ***P***(Not ***M***| ***E***). |  |
| Draw a Venn diagram to illustrate the information in the table |  |
| Find ***P***(***M*** and ***E***). |  |
| Find ***P***(***M*** or ***E***). |  |
| Find ***P***(not ***M***). |  |

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| **In a group of 35 children, 10 have blonde hair, 14 have brown eyes, and 4 have both blonde hair and brown eyes.** |  |
| Suppose that a contestant will be selected at random. Find the following probabilities to the nearest thousandth. | |
| ***P***(blonde) |  |
| ***P***(blonde and brown-eyed) |  |
| ***P***(blonde or brown-eyed) |  |
| ***P***(blonde | brown-eyed) |  |
| ***P***(brown-eyed | blonde) |  |

|  |  |
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| Recall the high school current affairs club that has members in all four grades (9, 10, 11, and 12) and of both genders (male and female). The numbers of students in the various grade/gender categories are given in the table. |  |
| **Write each probability in correct notation. Calculate each probability to the nearest thousandth.** | |
| ***P***(11th grade | male) |  |
| ***P***(female | 9th grade) |  |
| When selecting a club member at random, what is the probability that the student is a 9th grader given that the student is female? |  |
| When selecting a club member at random, what is the probability that the student is female given that the student is a 12th grader? |  |