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**AMDM Unit 2A Quiz Review: Venn Diagrams, Tree Diagrams, Area Models**

*For each problem, show your work or explain how you got your answer.*

1. From a survey of 100 college students, a marketing research company found that 75 students owned an iPhone, 45 owned a car, and 35 owned an iPhone and a car. Draw a Venn diagram to represent the situation.
2. How many students do not own a car or an iPhone?
3. What is the probability that a student owns an iPhone and a car?
4. What is the probability that a student owns a car but does not own an iPhone?
5. What is the probability that a student owns an iPhone, given that they own a car?
6. A coin is tossed three times. To the right, draw

a tree diagram representing this situation.

1. What is the probability of tossing three tails?
2. What is the probability of tossing at least two heads?
3. Use the area model below to find the probability of picking X?

|  |  |
| --- | --- |
| X | Y |
| Y |
| X | X | Y |

1. To the right, draw an area model for the maze below.

Apple Orchard

Apple Orchard

Apple Orchard

Strawberry Patch

Strawberry Patch

Start

1. What is the probability of not going to the apple orchard?
2. If 50 people go through the maze this Saturday, how many people will go to the strawberry patch?
3. In Ms. Smith’s math class, 70% of the students have an A in the class, and 30% of the students have a B in the class. Of the 70% of student who have an A in the class, 70% made an A on the first test, 20% made a B on the first test, and 10% made a C on the first test. Of the 30% of students who have a B in the class, 40% made an A on the first test, 50% made a B on the first test, and 10% made a C on the first test. **To the right, in the box, draw a tree diagram to represent this situation**.
4. Find P(having an A in the class and getting an A on the test).
5. Find P(having a B in the class).
6. What is the probability of picking a student who made a B on the first test?