



Personal Tutors

Chapter 5

Personal Tutor Activity 5.1 – Use Venn Diagrams

- 1. Apply** An engineering company has conducted a survey to determine what features customers wish to have on their cell phones. An engineering intern has been tasked to create a Venn Diagram illustrating the survey results against the features of three cell phones being considered for production. Below are the three cell phones with their associated features as well as the results of the survey. Create a Venn diagram to illustrate the overlap of features with the results of the survey. Determine which cell phone you would recommend for production based on these results.

Feature	Cell Phone A	Cell Phone B	Cell Phone C
Text Messaging	X	X	X
Camera	X	X	X
Video Capability	X		X
Touch Screen		X	X
QWERTY Keyboard		X	
Long Life Battery	X		
Internet Capability	X	X	X

Feature	Survey Results
Text Messaging	100%
Camera	80%
Video Capability	50%
Touch Screen	60%
QWERTY Keyboard	30%
Long Life Battery	100%
Internet Capability	70%



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- 2. Starting Hint** Create a Venn Diagram illustrating the overlap in features of the phones. List the survey results percentage with the corresponding feature in the Venn Diagram.



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Personal Tutor Activity 5.2 – Multi-Stage Tree Diagrams

- 1. Apply** An engineering firm has designed a new product that requires three components. The components can be assembled separately before they are combined for the final product. There are two companies (A & B) that are capable of assembling Component 1. There are three companies (A, B, & C) that are capable of assembling Component 2. There are two companies (B & C) that are capable of assembling Component 3. Because there are multiple ways the components can be assembled, the Quality Control Department must insure that all of the products meet the final design specifications. A test must be conducted on each product. How many different ways can this new product be assembled using all three companies?

- 2. Starting Hint** Begin with Component 1A (component assembled at Company A) and Component 1B (component assembled at Company B) listed on the far left side of the tree diagram. Labeling each option with a component number and company letter will help in identifying the number of different ways the new product can be assembled.