

Handout #1

DP-VENN: Introduction to Venn Diagrams



Into

Talk About . . .

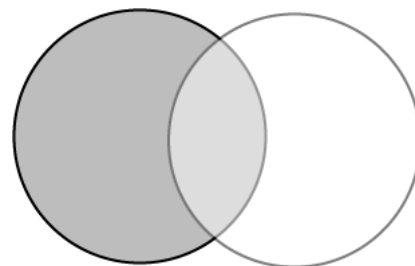
LESSON OBJECTIVE

When you complete this lesson, you will be able:

- To read and create Venn Diagrams.

• **Diagrams.** For example: *What are diagrams? Why do we use them? Diagrams are drawings that help us **visually** organize information.*

• **Venn Diagrams.** For example: *Today we're going to tackle Venn Diagrams. Venn Diagrams were a type of Diagram invented by John Venn. John Venn (1834-1923) was a British philosopher and mathematician who introduced the Venn diagram in 1881. They allow us to quickly look at the similarities and differences in sets of information or data.*



REVIEW



Think of all the food you ate today. List it all in a **table** with an appropriate **title (or header)**.



Definitions: Set

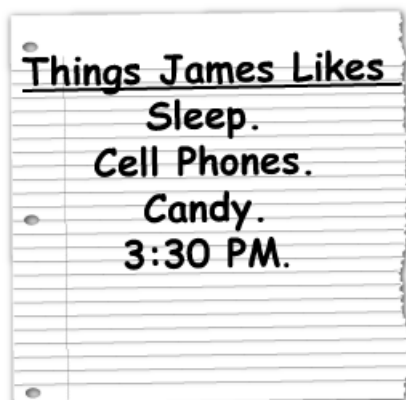
Let's take a look at a **set** of **related** data. For example, let's say James makes a list of things he likes. He can represent this set as a list (or table) or he can list them within a circle.

set: A set of data is just a collection of things that are unique but share something in common.

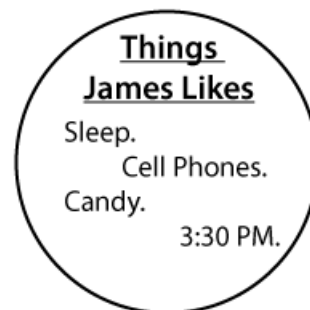


NOTE TO TUTOR

Feel free to make up another set or two. Be sure to stress that the things in a set must be unique but also must share some common characteristic.



A **set** is just a simple list of related things.



Are 'sleep' and 'candy' the exact same thing? Are they related? If they are related, how are they related in this problem?

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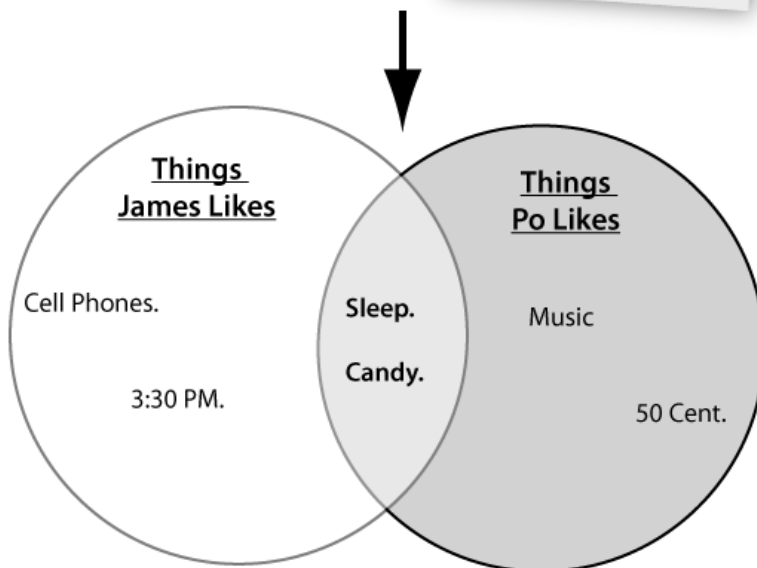
“” Definitions: Venn Diagrams

What if you have **more than one** set of data. Can you **display** this information at the same time?

Yes. And a great tool is a **Venn Diagram**.

Venn Diagram: A graphical tool for showing the relationship between different groups of things (sets).

Let's say James has a friend -- Po. Below is a list of things he likes. Now, let's show the things they like using a **Venn Diagram**.



A Venn Diagram



What things do James and Po both like?

What is something Po like but James doesn't?

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Create It: Create A Venn Diagram

DIRECTIONS

With your tutor, make up two sets of data. For example, you could try:

- 1 My Favorite Songs.
- 2 My Best Friend's Favorite Songs.

First, draw a **table** to represent the data. Then, draw a Venn Diagram to represent the situation.

First, make a table of the data:

Then, make a Venn Diagram to represent the situation.



NOTE TO TUTOR

Try to find two sets that have some common and some uncommon members. Other examples include:

- 1 Things I had for lunch today and things I had for lunch yesterday.
- 2 Months that start with 'J' and months that are cold.



NOTE TO TUTOR

If you want, make up another example!

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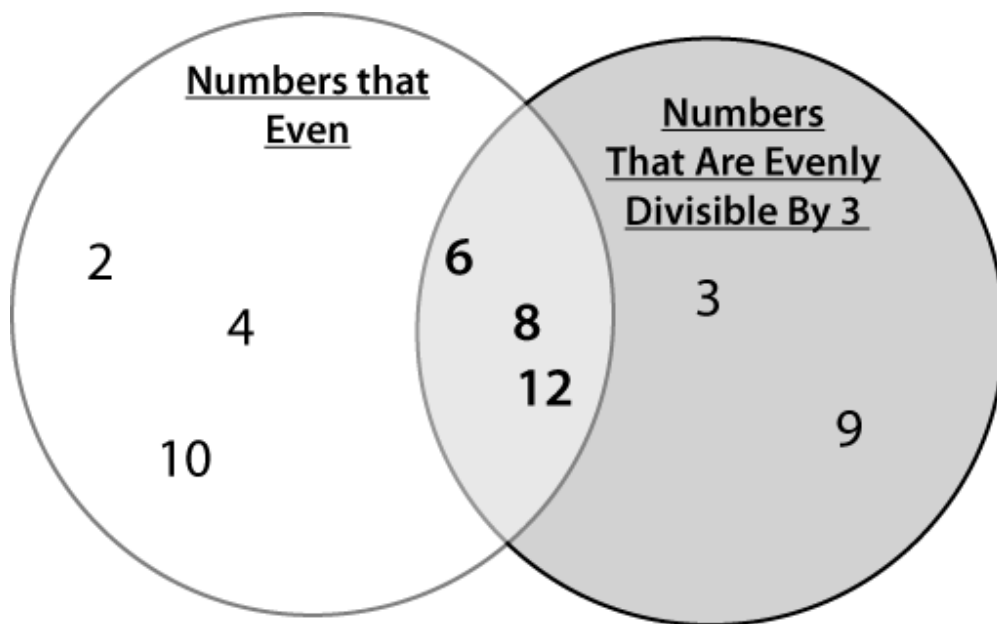


Correct It

Jamal answered the following question:

Take the numbers between 1 and 12. Create 1 set that are all the even numbers. Create a second set that are the numbers divisible by 3. Then, draw a Venn Diagram to represent the two sets.

Did he answer the problem correctly? With your tutor, look at his answer and fill out the steps.



Step 1: Create a set of all the even numbers between 1 and 12:

Step 2: Create a set of all the numbers between 1 and 12 that are evenly divisible by 3:

Based on these two sets, did Jamal answer the question correctly?

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Plot It

June Ping likes: **Soccer, Basketball, Swimming, and Volleyball.**

Susan likes: **Softball, Swimming, Yoga, and Soccer.**

First, fill in the table below to represent the situation (put an 'X' if they like the sport):

Sport	June Ping	Susan
Soccer		
Basketball		
Yoga		
Swimming		
Volleyball		
Softball		

Then, **create a Venn Diagram** to represent the table:

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Closure

What did we learn about today?

What is a "set"?

What is a Venn Diagram and what does it show about two sets?

Do you ever think you'll use a Venn Diagram in real life?

Worksheet #1

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Plot It

Below is a list of students who were asked "Have you ever been to California?" and "Have you even been to New York?". Below are their answers:

Student	Been To California	Been to New York
Joe	X	X
Greg	X	
Jamal	X	X
Po	X	
Shukri		X
Sam	X	X
Isiah	X	

Use this data to create a Venn Diagram.

Worksheet #1

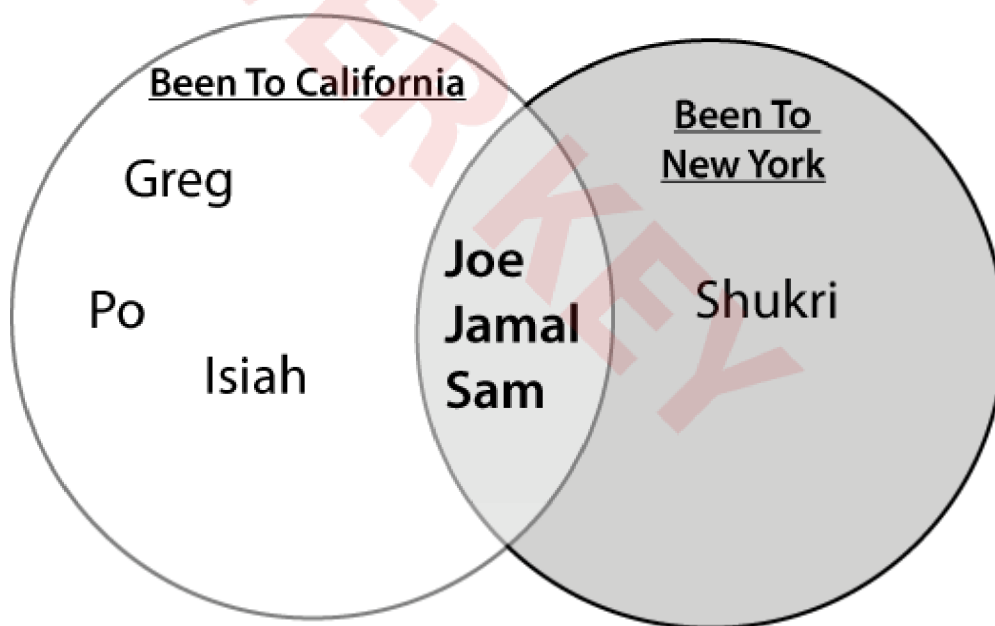
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Use this data to create a Venn Diagram.



Worksheet #2

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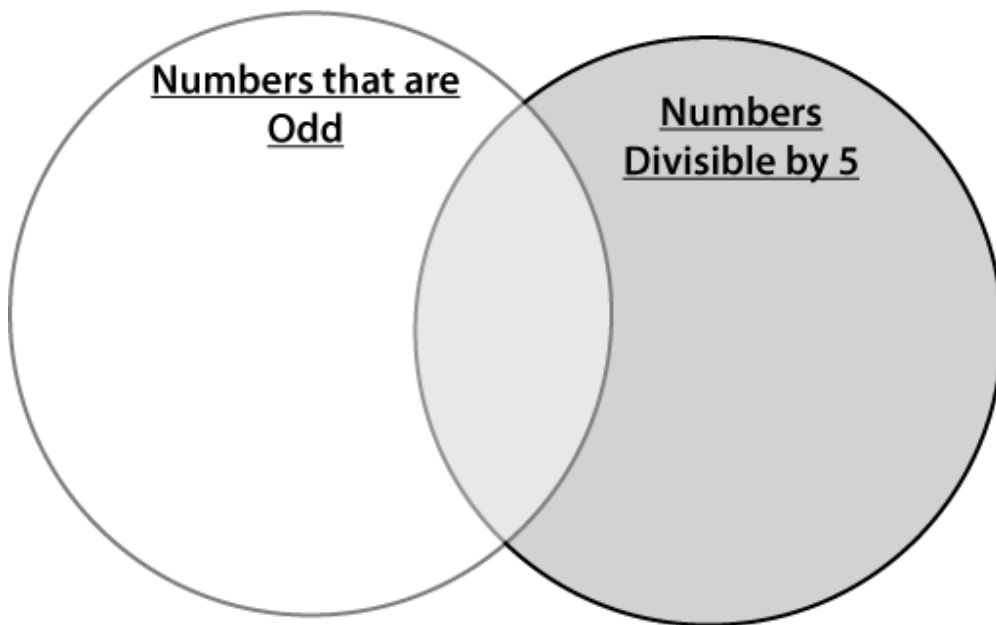


Challenge!

List all the numbers between 1 and 20. Then, create two sets:

- 1 All the numbers that are odd.
- 2 All the numbers that are evenly divisible by 5.

Then, fill in the Venn Diagram below to represent the situation:



Worksheet #2

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Challenge!

List all the numbers between 1 and 20. Then, create two sets:

- 1 All the numbers that are odd.
- 2 All the numbers that are evenly divisible by 5.

Then, fill in the Venn Diagram below to represent the situation:

