Pattern A

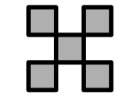

Figure 1

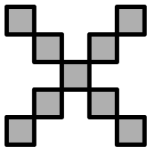

Figure 2

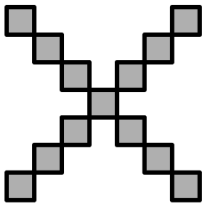

Figure 3

Figure	Number of Tiles
1	5
2	9
3	13
4	

Pattern B

Figure 1

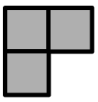

Figure 2

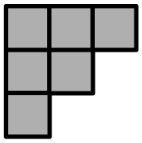

Figure 3

Figure	Number of Tiles
1	1
2	3
3	6
4	

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Unit A1.1, Lesson 2: Supplement Name _____

Pattern C

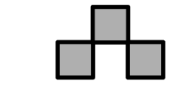
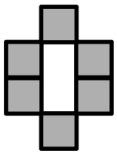


Figure 1



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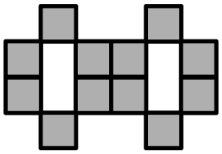

Figure 3

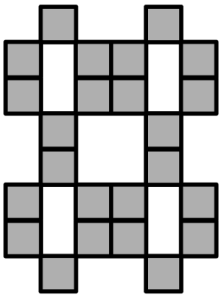

Figure 4

Figure	Number of Tiles
1	3
2	6
3	12
4	24

Make Your Own

Figure	Number of Tiles
1	4
2	7
3	10

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Science Mom Lesson 2

Unit A1.1, Lesson 3: Supplement Name _____

Screens 1–5

Figure 1

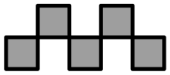

Figure 2

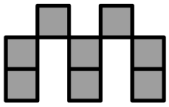

Figure 3

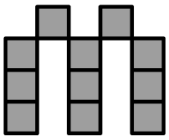

Figure	Number of Tiles
1	5
2	8
3	

Screens 6–8

Figure 1

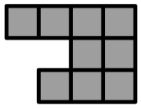

Figure 2

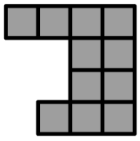

Figure 3

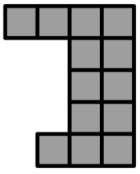

Figure	Number of Tiles
1	9
2	11
3	13

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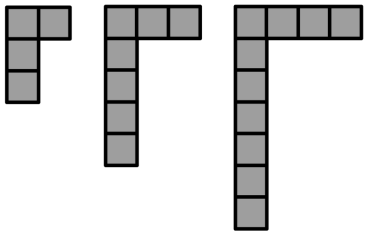
Unit A1.1, Lesson 3: Supplement Name _____

Screen 9

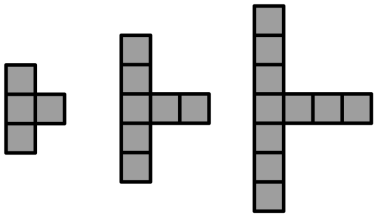
A

Figure 1 Figure 2 Figure 3



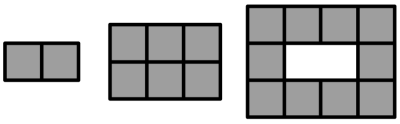
B

Figure 1 Figure 2 Figure 3



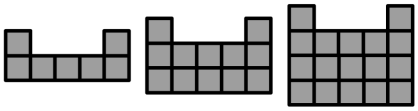
C

Figure 1 Figure 2 Figure 3



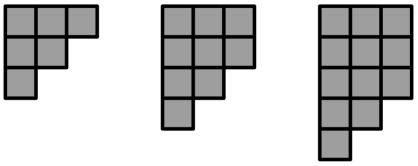
D

Figure 1 Figure 2 Figure 3



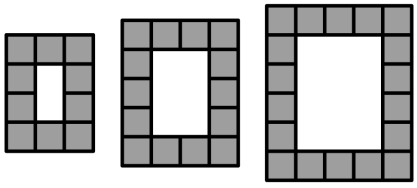
E

Figure 1 Figure 2 Figure 3



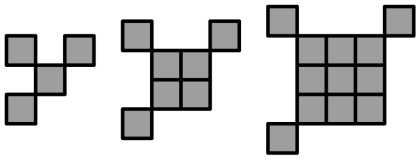
F

Figure 1 Figure 2 Figure 3



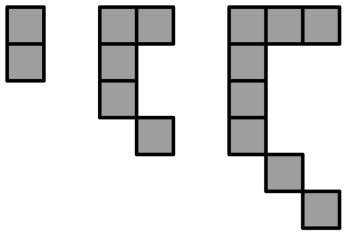
G

Figure 1 Figure 2 Figure 3



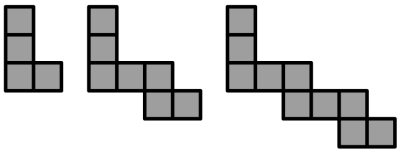
H

Figure 1 Figure 2 Figure 3



I

Figure 1 Figure 2 Figure 3



Temperature

The average global temperature has always varied from year to year. In the past half century, the average temperature has risen. An increase of a couple degrees may seem small, but such differences have huge impacts on the climate, natural systems, and sea levels.

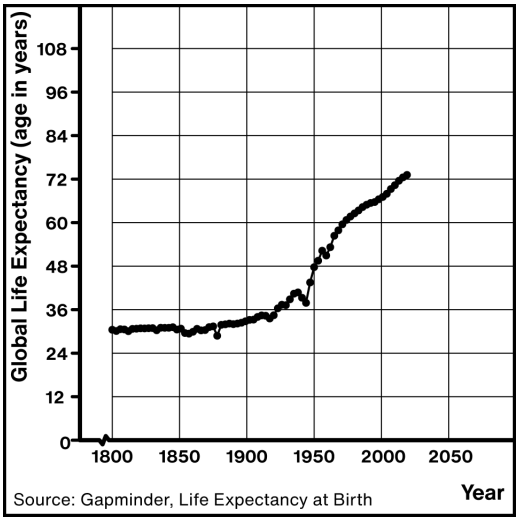
In recent years, countries have set goals to limit the rise of the global temperature. As of 2015, the goal is to limit the rise to "well below 2 °C" relative to the temperature before 1900.

Life Expectancy

Life expectancy is a measure of health that tells us the average age of death in a population. Before the 1800s, life expectancy was about 30 years everywhere in the world.

Advances in medicine, nutrition, and sanitation have helped increase life expectancy, although not equally. As of 2022, Japan has the highest life expectancy, about 85 years. In many countries, life expectancy is between 50 and 60 years.

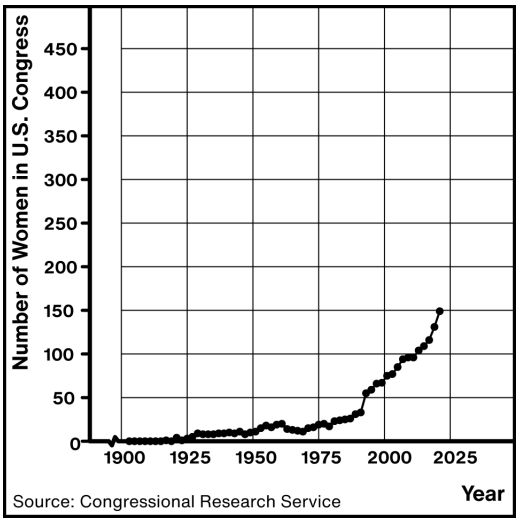
The life expectancy in the U.S. is about 78 years, but this varies widely within the country. Many factors, including pollution and access to medical care, mean that U.S. life expectancy ranges from 57 to 97 depending on zip code.



Women in Congress

For much of U.S. history, only men could vote. Congress consisted entirely of men, too, until Jeanette Rankin was elected to Congress in 1917. In 1920, the U.S. added the 19th amendment to the Constitution, which granted White women in all states the right to vote. The 1920s saw 11 more women in Congress.

New laws over the next several decades continued extending the right to vote to more and more women. The Voting Rights Act of 1965 in particular removed many barriers to voting, including discrimination on the basis of race. As of 2022, women make up 27% of the 535 members of Congress.



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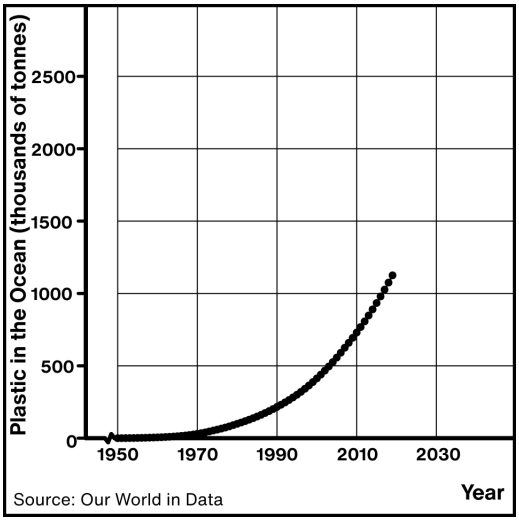
Unit A1.1, Lesson 11: Supplement

Ocean Plastic

Global plastic production grew rapidly beginning in the 1950s. Over the next 65 years, annual production of plastics increased from 2 million tonnes in 1950 to 381 million tonnes in 2015.

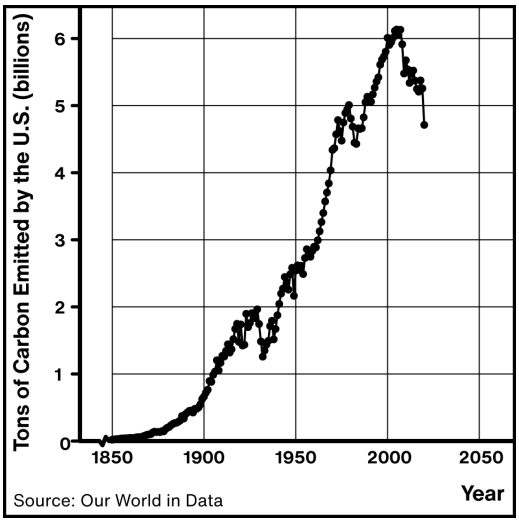
The world has struggled to figure out what to do with used plastic, such as single-use water bottles. Most plastics end up in landfills or get incinerated. Some plastic is mismanaged and ends up in rivers, which spill out into oceans. Once plastic is in the ocean, it breaks down into smaller particles, which can be hard to remove.



Carbon Emissions

This data shows the amount of carbon dioxide emitted by the U.S. each year since 1850. Every country, including the U.S., has seen an increase in carbon emissions during this time. This is due to a growing population, as well as a rise in other carbon-emitting activities.

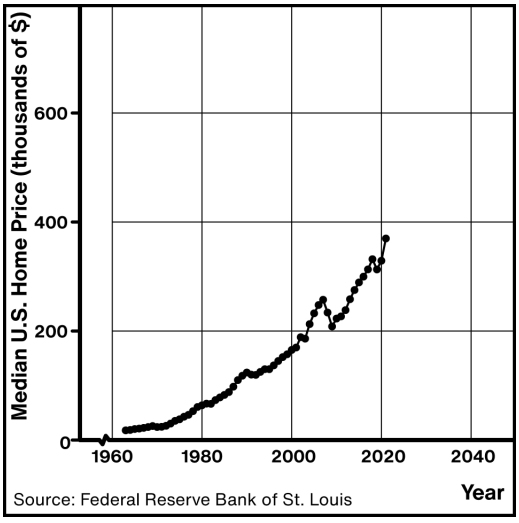
Countries across the world are seeking to reduce their carbon emissions. U.S. carbon emissions peaked around 2007 and have been trending downward ever since. Along with other countries, the U.S. has a goal of getting to 0 carbon emissions by 2050.



House Prices

The graph shows the median sale price of a home in the U.S. each year since 1962. Many factors explain the general rise in price.

First, *most things* get more expensive over time. Housing has gotten especially expensive, though. Partly, that is because many cities have not built enough houses to keep up with the increase in population (there are many reasons for this, including zoning laws and expensive materials). When housing is scarce, people are willing to pay more for homes and so the price goes up.



Learn more about these topics and others at OurWorldInData.org.

desmos Science Mom Lesson 13

Unit A1.2, Linear Equations and Inequalities: Notes Name _

Lessons 8–9: Linear Relationships in Equations, Tables, and Graphs

Summary

Equations, tables, and graphs are different ways to model a situation.

Situation: A lemonade stand sells lemonade for $3 per cup and cookies for $2 each. They made $12. Let be the number of cups of lemonade sold and be the number of cookies sold.

Show the steps to solve $3 + 2 = 12$ for .

Equation in Standard Form

$3 + 2 = 12$

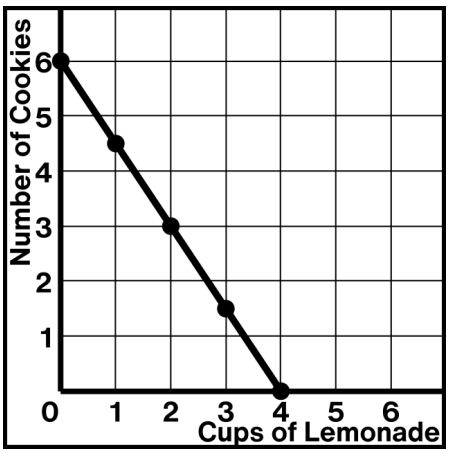
Equation Solved for

$= 6 - \frac{3}{2}$

Table

	0	2	4
	6	3	0

Graph



Explain how each form of the equation is connected to the situation, table, or graph.

The equation $3 + 2 = 12$ is connected to the _ _ _ _ _ _ _ _ because _ _ _ _ _ _ _ _

The equation $= 6 - \frac{3}{2}$ is connected to the _ _ _ _ _ _ _ _ _ because _ _ _ _ _ _ _ _ b

---

Things I Want to Remember

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Unit A1.2, Linear Equations and Inequalities: Notes Name _____

Lessons 8–9: Rewriting Two-Variable Equations

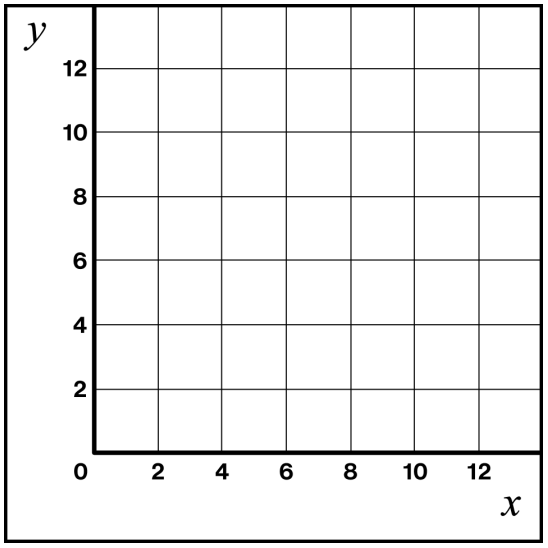
Try This!

Here is an equation in standard form: $4 + 2 = 24$.

1. Solve $4 + 2 = 24$ for .

2. Graph the equation $4 + 2 = 24$.

   Make a table if it helps with your thinking.



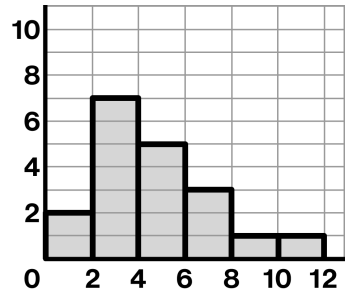
3. Write a situation that $4 + 2 = 24$ could represent.

   Write what and represent in your situation.

- ☐ I understand that the graph of a linear equation represents all the solutions to the equation.
- ☐ I can solve an equation for one of its variables and connect my new equation to its graph.
- ☐ I can make connections between equations, tables, descriptions, and graphs.
- ☐ I can write two linear equations to represent the same situation.

Unit A1.3, Lesson 4: Activity 3 Cards

A



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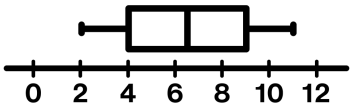

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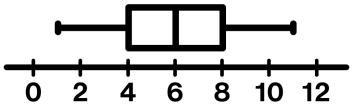

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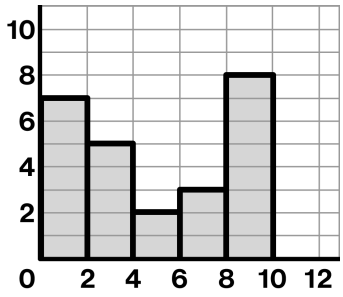

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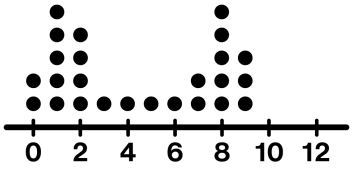

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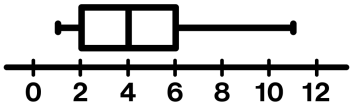

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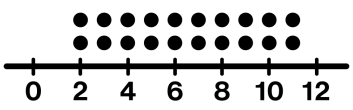

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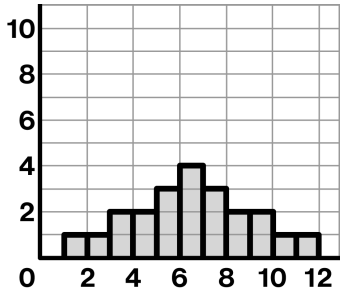
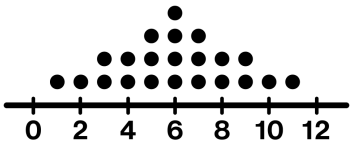
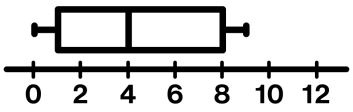
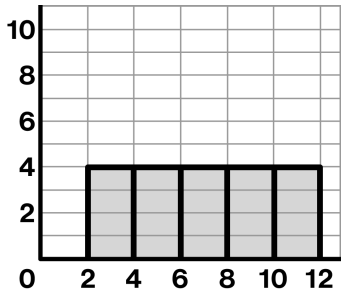
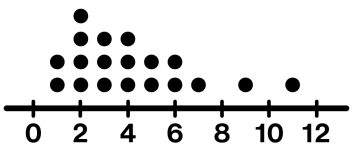


desmos Science Mom Lesson 22

Unit A1.3, Lesson 4: Activity 3 Supplement Name _____

Activity 3: All the Representations

	Dot Plot	Histogram	Box Plot	Description
Data Set 1				☐ Skewed ☐ Symmetric ☐ Bimodal ☐ Bell-shaped ☐ Uniform
Data Set 2				☐ Skewed ☐ Symmetric ☐ Bimodal ☐ Bell-shaped ☐ Uniform
Data Set 3				☐ Skewed ☐ Symmetric ☐ Bimodal ☐ Bell-shaped ☐ Uniform
Data Set 4				☐ Skewed ☐ Symmetric ☐ Bimodal ☐ Bell-shaped ☐ Uniform

desmos

Unit A1.3, Lesson 4: Activity 3 Supplement Name _____

Explore

For each situation below, say which data set from the previous page is most likely to describe it.

1.1 Students were asked: How much do you like baseball on a scale of 0–10?

1.2 Students in a class were each given a carton of eggs to take home. One week later, they recorded how many eggs were left in each carton.

2. For the two remaining data sets, write survey questions that might have produced the data.

Consider these five descriptions for the shapes of data sets.

Skewed	Uniform	Bell-shaped	Bimodal	Symmetric

3. Prisha noticed that a data set can sometimes have **more than one** shape. She wondered whether a data set could be both bimodal and symmetric. Make a dot plot of such a set, or say why it's not possible.

4. What are some other combinations of data shapes that are possible?

5. What are some combinations that you think are **impossible**?

Tables Template

