

2^4

$6x = 24$

Engineering Marvels

$12 > 35$

2^4

MUSCLE CARS

Graphs, Tables, and Equations



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Table of Contents

Introducing Muscle Cars!	4
Setting the Stage.....	6
Taking the World by Storm	16
Muscle Car Culture	22
A Lasting Impact.....	26
Problem Solving	28
Glossary	30
Index.....	31
Answer Key	32

Introducing Muscle Cars!

As soon as motorcars took the place of horses and carriages, engineers started working to improve them. People like good-looking cars. They also like cars that can get them places faster. That's where muscle cars come in!

People have loved muscle cars from the beginning. There was something really special about them. The engines had a lot of power. That, combined with a lightweight body, made them superfast. Some people tested that speed by racing them on streets or on **drag strips**. In fact, they were so much fun that car enthusiasts still love them!

Muscle cars were so popular that an entire **car culture** sprang up around them. Music, movies, and television reflected Americans' love for these cars.

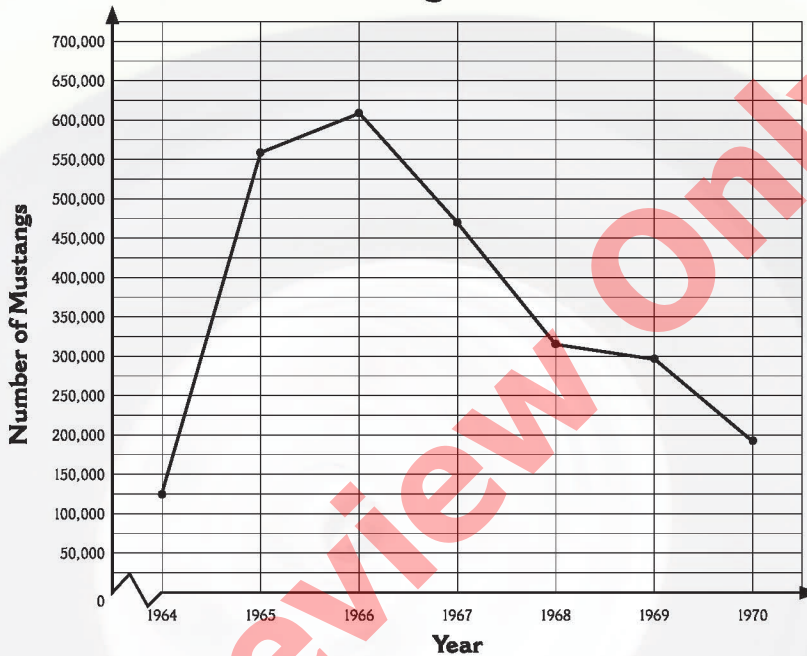
The muscle car era was primarily from 1964 to the early 1970s, but they left a legacy in the car world. The influence of muscle cars is still felt in the United States and in other parts of the world. Their impact evolved into one of the most memorable car eras of all time!



LET'S EXPLORE MATH

The Ford Mustang is a popular muscle car that is still in production. The graph shows the number of Mustangs produced each year during the muscle car era.

Mustangs Produced



1. What are the independent and dependent variables?
2. Describe the data by completing the sentence frame: During the muscle car era, the number of Mustangs _____.

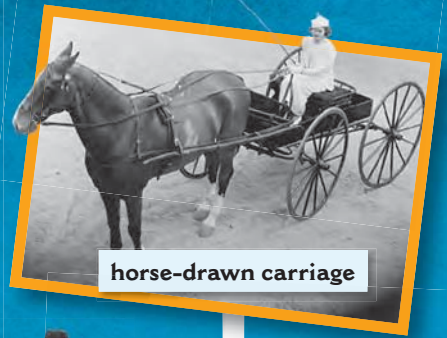


Setting the Stage

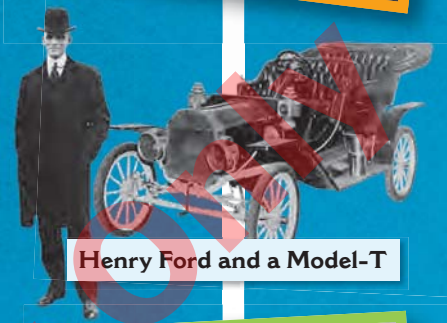
Originally, people got around on horseback or with horse-drawn carriages. By the early 1900s, the idea of horseless carriages—cars—was becoming popular. They were easy to use. However, they were expensive. This was because cars were made one at a time. A man named Henry Ford set out to change that.

Ford set up the first **assembly line** for cars. This allowed cars to be made quickly and inexpensively. Ford's car **was** called the Model-T. It **was** considered the first affordable motor vehicle. **From** that point, Americans fell in love **with** cars. They came in all shapes **and** sizes. But in the early 1940s, production of passenger vehicles was **halted**. **World War II** forced automakers to **repurpose** themselves as they made things **needed** for the war, such as tanks **and** airplanes.

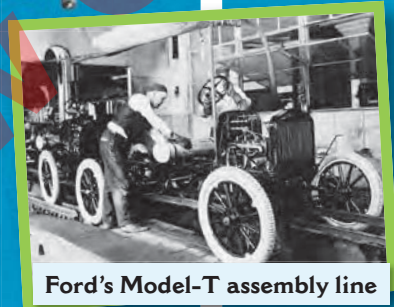
When the war ended in 1945, people **were** **thrilled**. The United States was on the winning side. Families were buying **houses** that were springing up in newly built suburbs. So many babies were born over the next few years that there was a **baby boom**. It was a **prosperous** time, and Americans were excited to buy cars again.



horse-drawn carriage



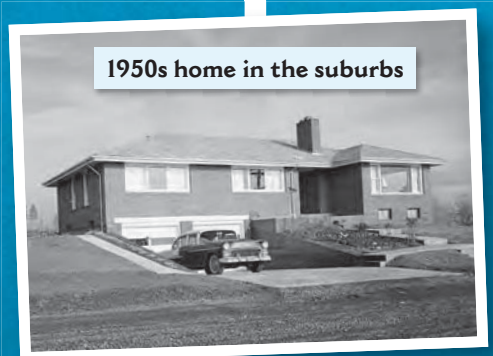
Henry Ford and a Model-T



Ford's Model-T assembly line



automakers building tanks during World War II

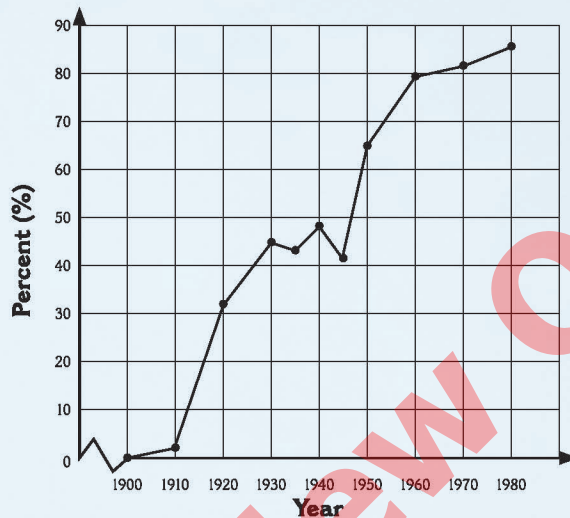


1950s home in the suburbs

LET'S EXPLORE MATH

The graph shows the approximate percent of households in the United States that owned cars.

Car-Owning U.S. Households



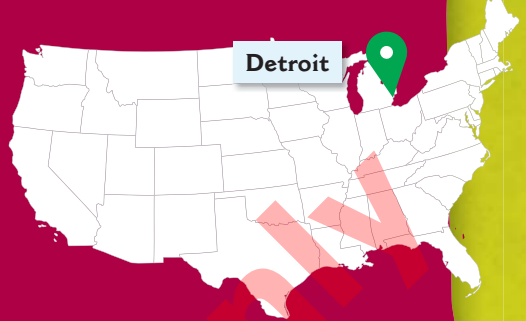
1. What does the ordered pair (1900, 0) mean?
2. What does it mean when the line on the graph goes down?
3. Write the data from this graph in a table like this one.

Year	Percent (%)
1900	
1910	
1920	
1930	
1940	
1950	
1960	
1970	
1980	

4. What is an advantage of displaying this data as a graph instead of a table?

The Big Three and Big Changes

After the war, the car industry played a big role in the recovery of the United States' economy. There were three major auto companies producing most of the cars in the country. They were known as the Big Three—Ford Motor Company, Chrysler, and General Motors (GM). All three were located in the city of Detroit.



The Big Three provided Americans with lots and lots of cars. Car sales doubled by the end of the 1950s. The Big Three also created many jobs. At that time, the car industry employed about one in six working Americans.

Engineers for the Big Three worked to make cars better. They made cars with new options, such as power steering and automatic transmissions. Cars became safer too, as some began to have seat belts and power brakes.

Cars also got a new look. Travel and space were popular themes in the 1950s. Airplanes, rockets, and trains influenced car body shapes. Cars became wider and longer.

But by far, the biggest cultural impact came from the engines.



1950s Ford cars are checked by workers before being sold.

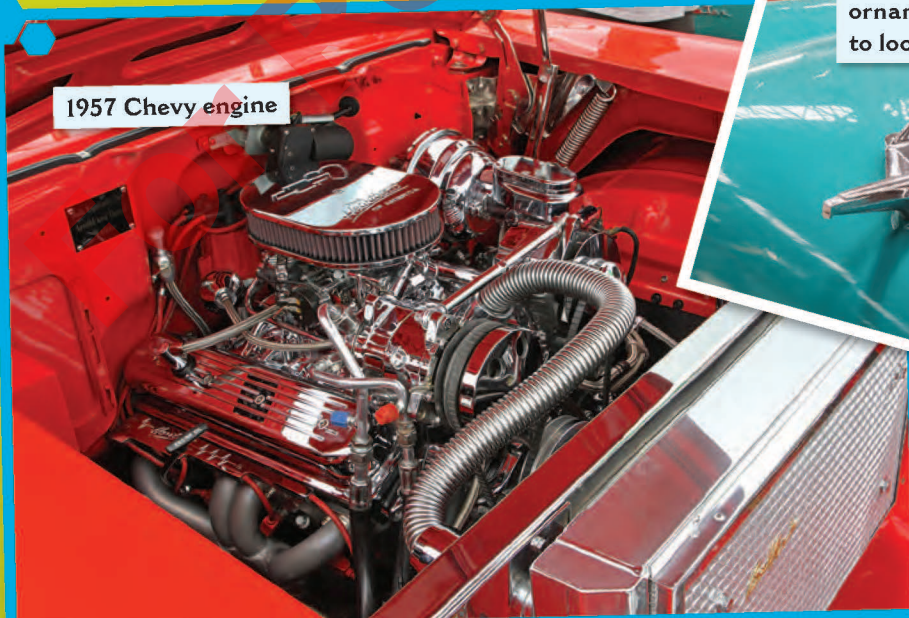


This 1956 Chevy Bel Air was produced by GM.

LET'S EXPLORE MATH

Car sales doubled by the end of the 1950s. Use b to stand for the number of cars sold before the end of the decade and a to stand for the number of cars sold at the end of the decade. Choose all the equations that show how the variables are related.

- A.** $a = 2b$ **B.** $b = 2a$ **C.** $a = \frac{1}{2}b$ **D.** $b = \frac{1}{2}a$



1957 Chevy engine



This 1955 Chevy hood ornament was designed to look like an airplane.