

# Running on autopilot: Tesla makes first car that changes lanes by itself

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Word Count **543**



Elon Musk, CEO of Tesla Motors Inc., introduces the Model X car at the company's headquarters in Fremont, California, Sept. 29, 2015. Photo: AP Photo/Marcio Jose Sanchez

DETROIT, Mich. — Electric car maker Tesla Motors has been trying to develop a fully self-driving automobile. On Wednesday, it introduced a revolutionary new autopilot system. The system lets cars change lanes by themselves.

The car makers Mercedes, Audi and Volvo already have their own autopilot systems. Tesla's new system does everything those other systems can do. It automatically keeps a car within its lane and maintains a certain distance from the car in front of it. It can find a parking spot and park itself. It also uses cameras and sensors to warn drivers when the car is in danger of being hit from the side.

However, Tesla's new lane-changing feature is a first for the car industry.

Elon Musk, Tesla's chief executive officer, said the new system is a first in another way as well. He said it will constantly collect information on driving conditions and driving behavior. Over time, it will use that information to improve itself. For example, the system will note how quickly drivers can safely navigate a particular bend in the road or where stop signs are located.

The new system will change the experience of driving dramatically, Musk said.

### **No Hands-Free Driving — Not Yet**

Musk added a word of caution: Drivers need to keep their hands on the wheel, and the autopilot system will remind them if they do not.

"We're being especially cautious at this early stage, so we're advising drivers to keep their hands on the wheel just in case," he said. The system is still very new, he added.

Musk said it will be at least three years before fully hands-free driving is possible. He added that it will probably take longer than that for the government to allow it.

### **Your Call Is Your Car's Command**

The new autopilot feature can be added to around 60,000 vehicles that are already on the road. Owners will be able to install the update themselves. They can update software in their car's computer system over the Internet. Tesla automobiles made before September 2014 cannot be updated because they have older sensors.

Tesla is already working on another update, Musk said. It will allow a car to drive itself in and out of garages when the owner calls it.

### **A Catch-Up Game**

Automobile industry expert Karl Brauer said Tesla's new system puts it ahead of other car companies. General Motors' new Super Cruise system, for example, does not allow automatic lane-changing.

Brauer said the other companies will now have to try to catch up with Tesla.

"This is the game we're going to be playing, round and round, for the next five to 10 years," Brauer said. "Each time there's a step by someone out there, everyone will have to match it."

With each step forward, the automobile industry will move closer to the goal of a fully self-driving car.

## **Autopilot's Risks And Rewards**

Brauer said the rapid pace of change could be dangerous. It will mean that drivers may not know what their car is capable of.

If drivers do not fully understand their own cars, it could "introduce many more problems," he said.

Musk remains convinced about the benefits of autopilot, however.

"In the long term, it will be safer than a person driving," he said.

## Quiz

- 1 Read the quote from the article.

*"In the long term, it will be safer than a person driving," he said.*

Which sentence BEST supports the conclusion that the autopilot system is safer than a person driving?

- (A) It will allow a car to drive itself in and out of garages when the owner calls it.
  - (B) He said it will constantly collect information on driving conditions and driving behavior.
  - (C) The system lets cars change lanes by themselves.
  - (D) It also uses cameras and sensors to warn drivers when the car is in danger of being hit from the side.
- 2 Which of the following words BEST explains the meaning of the word "navigate" in the sentence below?

*For example, the system will note how quickly drivers can safely navigate a particular bend in the road or where stop signs are located.*

- (A) manage
  - (B) determine
  - (C) survive
  - (D) engage
- 3 Choose the paragraph from the introduction [paragraphs 1-5] that explains how Tesla's new system can be updated.

4 Read the quote from the article.

*"This is the game we're going to be playing, round and round, for the next five to 10 years," Brauer said.*

What is the "game" being played?

- (A) the automobile industry making new sensors
- (B) the automobile industry keeping up with cruise systems
- (C) the automobile industry competing to produce a self-driving car
- (D) the automobile industry trying to catch up to Tesla

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**NTI 6th Grade Math Day 5****Question 1 of 10**

What is the difference in wind strength between Force 3 and Force 8?

force number	description	speed
force 1	light air	1.8 mph
force 2	light breeze	5.6 mph
force 3	gentle breeze	9.3 mph
force 4	moderate wind	16 mph
force 5	fresh wind	22 mph
force 6	strong wind	28 mph
force 7	near gale	35 mph
force 8	gale	42 mph
force 9	severe gale	50 mph
force 10	storm	58 mph
force 11	severe storm	68 mph
force 12	hurricane	73 mph

- A. 3.27mph
- B. 5.1mph
- C. 32.7mph
- D. 51.3mph

**Question 2 of 10**

To find the sum of the following, what would you need to do?

$$1.36 + 0.37 + .426 + .07$$

- A. Add the first two numbers and then the last 2 numbers.
- B. Drop all zeros and then add.
- C. Drop the decimals, line up the numbers on the right, and then add.
- D. Line up the numbers so the decimals are in line, and then add.

**Question 3 of 10**

Which is the largest number?

- A. \$56.69
- B. \$86.95
- C. \$90.86
- D. \$63.39

**Question 4 of 10**

What is the Greatest Common Factor of 36 and 27?

- A. 3
- B. 4
- C. 6
- D. 9

**Question 5 of 10**

Find the least common multiple of 5 and 9.

- A. 9
- B. 15
- C. 45
- D. 90

**Question 6 of 10**

Karen has 39 chocolate mints and Lily has 26 lollipops. They are going to combine their candy and make favors for lunch trays at the children's hospital. They want to put at least two of each kind of candy in a bag and they don't want any left over candy.

What is the greatest number of identical bags they can make and how many pieces of candy will they put in each one?

- A. 13 bags with 3 chocolate mints and 2 lollipops
- B. 12 bags with 2 chocolate mints and 2 lollipops
- C. 9 bags with 4 chocolate mints and 3 lollipops
- D. 6 bags with 6 chocolate mints and 4 lollipops

**Question 7 of 10**

Find the greatest common factor of 36 and 40.

- A. 12
- B. 8
- C. 4
- D. 132,480

**Question 8 of 10**

The greatest common factor of two numbers is 5. The greater number is 60.

Which number could be the lesser number?

- A. 30
- B. 15
- C. 12
- D. 25



**Question 9 of 10**

Solve.

$5.25 \times 2.125 = \underline{\hspace{2cm}}$

- A. 9.87525
- B. 10.294
- C. 10.575
- D. 11.15625

**Question 10 of 10**

$6.2 - 3.1 \times 5.2 = \cdot$

- A. 16.12
- B. 6.2
- C. -9.92
- D. -15.82

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