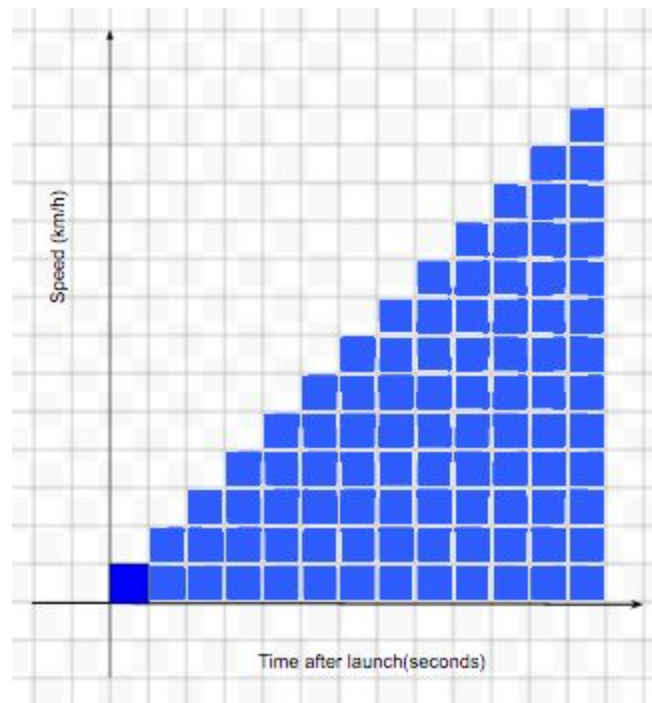


# Maths Puzzle in Space (Answers)

## Question 1)

Hopefully, you've drawn something that looks a lot like a **triangle**! Here's mine:



## Question 2)

To find the speed after four seconds, count how many squares are in the fourth column. Each square counts for 100 kilometres per hour, so after four seconds the rocket is going at **400 kilometres per hour**, which is faster than the fastest-ever Formula 1 car!

## Question 3)

You can do exactly the same thing with the twelfth column to find that the speed after 12 seconds is **1,200 kilometres per hour**.

## Question 4)

To find out when the rocket is going at 1,000 kilometres per hour, you need to work out which column shows a speed of 1,000 kilometres per hour. Because each square counts for 100 kilometres per hour, you need to find the column with ten squares in ( $1,000 = 10 \times 100$ ). That's the tenth column, so the rocket breaks the sound barrier after **10 seconds**.

## Question 5)

After one minute (60 seconds), the rocket's fallen off the end of the graph! You have

to think outside the box a bit and see if you can spot a pattern:

1 second	100 kilometres per hour
2 seconds	200 kilometres per hour
3 seconds	300 kilometres per hour

... ..

Hopefully it jumps out at you! To get the speed, you multiply the number of seconds by 100. So, after 60 seconds, the rocket is travelling at **6,000 kilometres per hour**.

#### **Question 6)**

To find out how long it takes to reach 27,600 kilometres per hour, you need to work backwards: the opposite of multiplying is dividing! It takes  $27,600 \div 100 = 276$  **seconds** to get up to that speed -- about four and a half minutes!

#### **Question 7)**

Lastly, if you've counted the squares carefully, the rocket travels **5,500 kilometres** in the first ten seconds -- about the distance from Belfast to Washington, DC.