

# Spitfire Maths



The Supermarine Spitfire is the most iconic warplane in British history and was famously flown during the Battle of Britain. It was powered by a Rolls-Royce Merlin engine and could travel at a top speed of 360mph or 580kmh. It could carry 164 gallons of fuel, and travelling at top speed it used 50.3 gallons of fuel per hour.

Before a pilot could take off, engineers needed to work out how long and how far the aircraft could fly. A lot of technical improvements were based on increasing the speed and distance. Of course, this involved doing maths calculations so, using the information above, have a go at answering the questions below.

**How many complete hours could a Spitfire travel at full speed on a full tank of fuel?**

**How many miles could it travel in this time?**

**Would there be any fuel left over? If yes, how many gallons?**

**Can you calculate how much longer the Spitfire could fly on the leftover fuel?**



*Spitfire designed by R.J Mitchell on display at the RAF Museum.*

Using the map below, can you find any other places you could fly to in a Spitfire at top speed?



Did you get the correct answers? Don't forget to share what you have learned with us on social media!



@rafmuseum

Answers:

1. 164 gallons divided by 50.3 gallons per hour = 3 complete hours
2. 360mph x 3hours = 1080miles
3. 164 - 150.9 = 13.1 gallons of fuel
4. 50.3 gallons per hour divided by 60 minutes = 0.8383 gallons per minute, 13.1 gallons divided by 0.8383 = 15.63 minutes of travel