

Spitfire Maths



The Supermarine Spitfire is the most iconic warplane in British history. Famously flown during the Battle of Britain, it was one of the reasons we were able to win. 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.

Pilots often had to travel long distances and for long hours, so before take-off engineers needed to work out how long and how far the planes could fly. A lot of improvements were based on increasing the speed and distance. Of course, this involved doing a few 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?

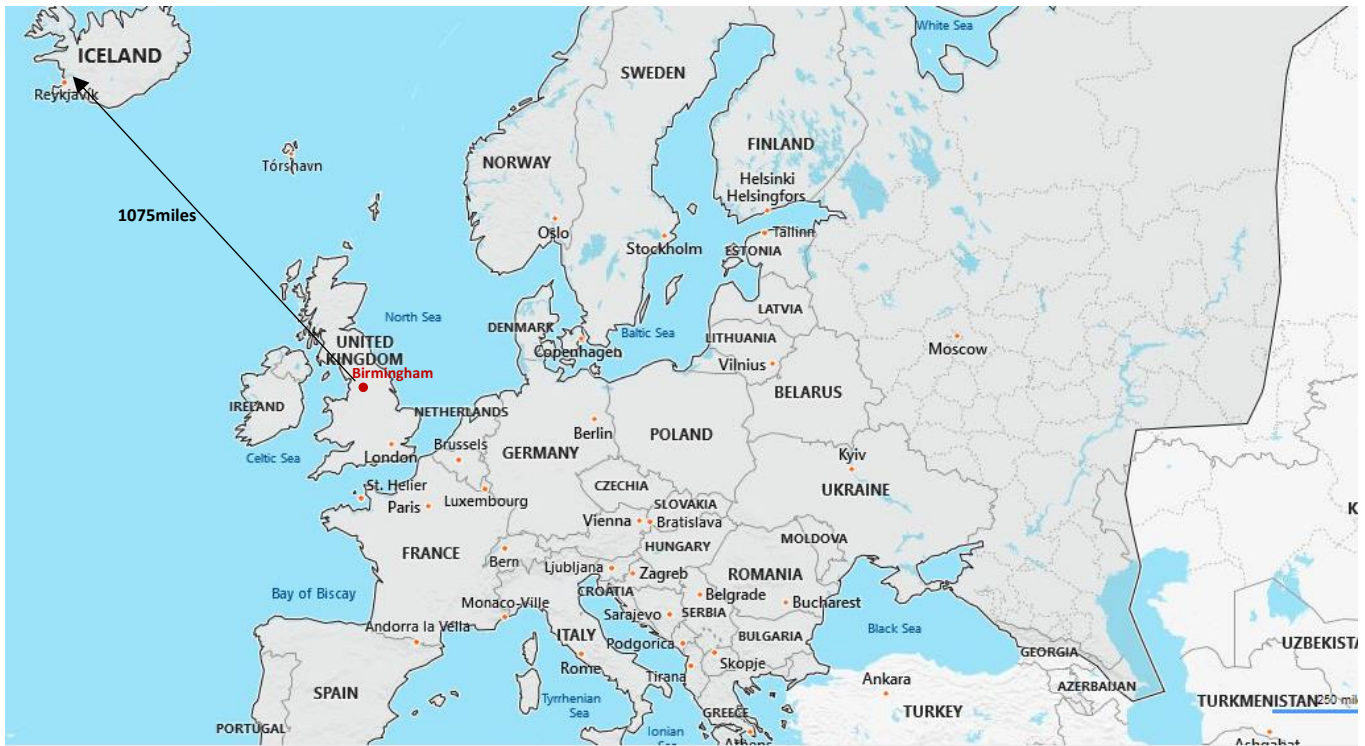
Would there be any fuel left over? If yes, how many gallons?

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 60minutes = 0.8383 gallons per minute, 13.1 gallons divided by 0.8383 = 15.63 minutes of travel