

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!



RAF Museum Learning



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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