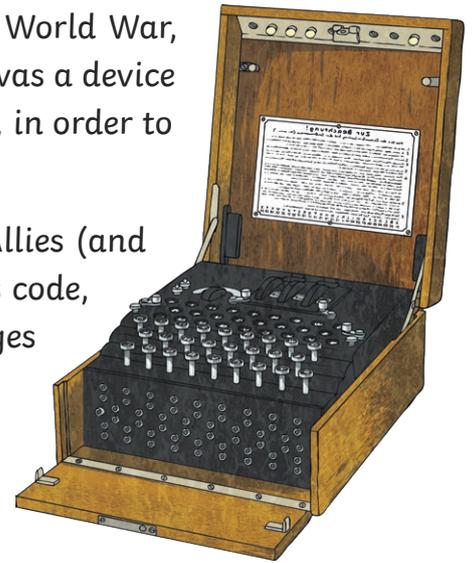# VE Day Maths Puzzle

One major breakthrough that helped the Allies win the Second World War, was being able to break the Enigma code. The Enigma Machine was a device used by the German army to create an almost unbreakable code, in order to hide their secret messages.

Using problem solving, maths, code breaking and science, the Allies (and in particular a man named Alan Turing) were able to break this code, enabling them to intercept and read all of the secret messages being sent by the Axis forces.

In this maths puzzle, you will be investigating a number rule to test if it is true or false.

Amazing Fact

If you take any number, double it, add 10, divide by 2 and subtract your original number, the answer will always be 5.

Challenge

See if this is true.

1. Double 5 = ☐ + 10 = ☐ ÷ 2 = ☐ - 5 = ☐

2. Double 7 = ☐ + 10 = ☐ ÷ 2 = ☐ - 7 = ☐

3. Double 3 = ☐ + 10 = ☐ ÷ 2 = ☐ - 3 = ☐

4. Double 9 = ☐ + 10 = ☐ ÷ 2 = ☐ - 9 = ☐

5. Double 4 = ☐ + 10 = ☐ ÷ 2 = ☐ - 4 = ☐

6. Double 2 = ☐ + 10 = ☐ ÷ 2 = ☐ - 2 = ☐

To help develop your problem-solving skills to Enigma levels, you could also try to find out:

• why this works;

• about other tricks that can be performed with numbers;

• a number trick of your own to confuse your friends.

VE Day Maths Puzzle Answers

1. Double 5 = | **10** | + 10 = | **20** | ÷ 2 = | **10** | - 5 = | **5** |

2. Double 7 = | **14** | + 10 = | **24** | ÷ 2 = | **12** | - 7 = | **5** |

3. Double 3 = | **6** | + 10 = | **16** | ÷ 2 = | **8** | - 3 = | **5** |

4. Double 9 = | **18** | + 10 = | **28** | ÷ 2 = | **14** | - 9 = | **5** |

5. Double 4 = | **8** | + 10 = | **18** | ÷ 2 = | **9** | - 4 = | **5** |

6. Double 2 = | **4** | + 10 = | **14** | ÷ 2 = | **7** | - 2 = | **5** |