

Week 2: Unlock the Padlocks 13 04 2020

Use the clues to find the number for each padlock. The puzzles get harder! You can start where you like, do one or do them all.

Below is some vocabulary that you might need help with:

Product means the same as multiply e.g. the product of 3 and 4 is 12.

Consecutive numbers means numbers in order e.g. 3, 4, 5 are consecutive numbers.

A palindrome reads the same way forwards as backwards e.g. 7887.

A Squared number is symbolised by ² at the top of the number e.g. 6² is 6 x 6 = 36

A prime number is a number divisible by 1 and itself. The prime four numbers between 0 and 9 are 2,3,5,7. The number 1 is not prime.

<p style="text-align: center;">Padlock 1 : a 2 digit code</p> <ul style="list-style-type: none"> • The number is even • It is divisible by 10 • The tens digit is the sum of 2 and 3 	<p style="text-align: center;">Padlock 4: a 4 digit code</p> <ul style="list-style-type: none"> • The tens digit is less than 5, even and greater than 1. • The total of all the digits is 15. • The hundreds digit is 1. • The thousands digit is 2 less than the tens digit. • The number is smaller than 3000.
<p style="text-align: center;">Padlock 2 : a 2 digit code</p> <ul style="list-style-type: none"> • The number is odd. • It is greater than 33 but less than 40. • The difference between the 2 digits is 4. 	<p style="text-align: center;">Padlock 5: a 5 digit code</p> <ul style="list-style-type: none"> • The code is a palindrome. • The hundreds digit is the answer to $27 \div 9$. • The Hundred thousands digit is 1 more than the thousands digit. • 0 is not used in this number. • The total of all the digits is 3².

Padlock 3: a 3 digit code

- The total of the digits add to 10.
- The product of the hundreds and ones digit is 15.
- The hundreds digit is the largest of the three digits.

Padlock 6: a 6 digit code

- The hundreds digit is prime as is the hundred thousands digit.
- It is more than 400 000 but less than 500 000.
- The digits of the code are consecutive numbers.