

Name & Surname: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_

Grade 6 & 7 2021 # 33 Hand in by Thurs 11 Nov

3 more problems

1. The 4-digit number, 5KK1, is divisible by 3. How many digits could K represent?

The digits must add to a multiple of 3:

Thus, must be a multiple of 3, which means

ie, K could represent 4 digits

2. Find the five-digit number using the clues below:

* There are no zeros and no digit is repeated
* The first digit is a prime number.
* The third digit is double the first digit.
* The fourth digit is the third digit plus three.
* The fifth digit is the difference between the first digit and the fourth digit.
* The second digit is equal to the fifth digit minus the first digit.

3. It takes Bill 20 hours to paint a house and it takes George 30 hours to paint a house of the same size. How long would it take if they paint the house together?

In one hour, Bill would paint of the house, and George would paint of the house. Working together, they would paint

in one hour, which means they would take 12 hours to paint the house.