

- 1) Use your knowledge of multiples to help you calculate the answer to these long division questions:



- a)  $3785 \div 15 =$                       b)  $1486 \div 21 =$   
c)  $2568 \div 28 =$                       d)  $4365 \div 35 =$

- 2) Solve these division word problems. Think carefully about the effect the remainder will have on your final answer.

- a) A coach can carry 35 supporters to a football match. How many coaches will be needed in order to carry 4050 supporters?



- b) A factory is packing boxes of books. Each box can hold 26 books. How many **full** boxes will the factory have after packing 3410 books?



- c) A school needs 2780 cartons of orange juice for the canteen. There are 18 cartons of juice in each box. How many boxes of juice will they need to order?



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- 1) Two children have been asked to solve this problem:  $2422 \div 14$ .



I don't think that there will be a remainder because 2422 will be a multiple of 14 as it is divisible by 2 and 7.

I think that this will leave a remainder because 2422 is not a multiple of 4 or a multiple of 10.



Who is correct? Explain your reasoning.

- 2) Use these division calculations to decide if the statements are always, sometimes or never true. Explain your reasoning.

$$4822 \div 22 = \boxed{\phantom{000}} \quad 1176 \div 24 = \boxed{\phantom{000}}$$

$$2821 \div 11 = \boxed{\phantom{000}} \quad 1281 \div 21 = \boxed{\phantom{000}}$$

- a) Even divisors will not leave a remainder when the dividend is even.
- b) If a number can be divided by a divisor without leaving a remainder, the number is also divisible by all the factors of that divisor.
- c) Prime number divisors leave a remainder.

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- 1) Choose a four-digit number from the numbers below.



1392	1650	1536
1824	3675	1958
1386	2420	2058

- a) Which divisors from the table will not leave a remainder when you divide your number by them? Prove it.

Two-Digit Divisors	One-Digit Divisors
21	2
11	3
22	7
16	8

- b) What do you notice about the relationship between the divisors that leave no remainders?
- c) With your four-digit number, can you identify which other divisors, that are less than 20, would leave no remainder?

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