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

a) 3785 ÷ 15 =

b) 1486 ÷ 21 =

c) 2568 ÷ 28 =

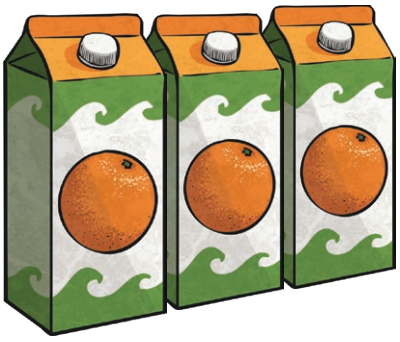
d) 4365 ÷ 35 =

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?



1) Two children have been asked to solve this problem: 2422 ÷ 14.

Oscar

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.

Lorna

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 ÷ 22 = ☐ 1176 ÷ 24 = ☐ 2821 ÷ 11 = ☐ 1281 ÷ 21 = ☐

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.

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?