



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



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.



Lorna

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.

$4822 \div 22 = \square$ $1176 \div 24 = \square$ $2821 \div 11 = \square$ $1281 \div 21 = \square$

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?