

Y6 Maths 3.4.20

(complete this today and the inverse statements at the bottom of the page if you have time)

Always, Sometimes or Never? Number (NRICH REASONING) Multiplication is the inverse of division. What does inverse mean?

Always, Sometimes or Never? Number

Are the following statements always true, sometimes true or never true?

How do you know?

Write out the statement and “PROVE IT” with **3** examples each time, so prove whether the statement is **always true/sometimes true or never true**.

Why do this problem?

These tasks are a great opportunity for learners to use reasoning to decipher mathematical statements. We often make mathematical claims that are only true in certain contexts and it is important for learners to be able to look critically at statements and understand in what situations they apply

The sum of three numbers is odd	If you add 1 to an odd number you get an even number
Multiples of 5 end in a 5	If you add two odd numbers you get an odd number
If you add a multiple of 10 to a multiple of 5 the answer is a multiple of 5	

What about these more complex statements?

When you multiply two numbers you will always get a bigger number	If you add a number to 5 your answer will be bigger than 5
A square number has an even number of factors	The sum of three consecutive numbers is divisible by 3
Dividing a whole number by a half makes it twice as big	

When we divide 4 digits by 2 digits in bus stop method we cannot end up with a 4 digit answer.	When we divide 4 digits by one digit in bus stop method we cannot end up with a 4 digit answer.
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If you have finished the above, use the inverse statements "4 for the price of 1"
e.g

$7 \times 6 = 42$ so $6 \times 7 = 42$ so $42 \div 6 = 7$ so $42 \div 7 = 6$ to

Show the 4 related statements for these calculations below. You will have to find the first answer but then you only need to juggle the numbers to make your four statements remember.

A. $15 \times 12 =$

B. $6548 \div 4 =$

C. Now write this answer as a decimal (up to 2 decimal places)
 $2935 \div 3 =$