National Centre for Excellence in the Teaching of Mathematics

Evaluating mathematical statements

Always, sometimes or never true?

$a \times b = b \times a$ It doesn't matter which way round you multiply, you get the same answer.	$a \div b = b \div a$ It doesn't matter which way round you divide, you get the same answer.
$12 + a > 12$ If you add a number to 12, you get a number greater than 12.	$12 \div a < 12$ If you divide 12 by a number, the answer will be less than 12.
$\sqrt{a} < a$ The square root of a number is less than the number.	$a2 > a$ The square of a number is greater than the number.

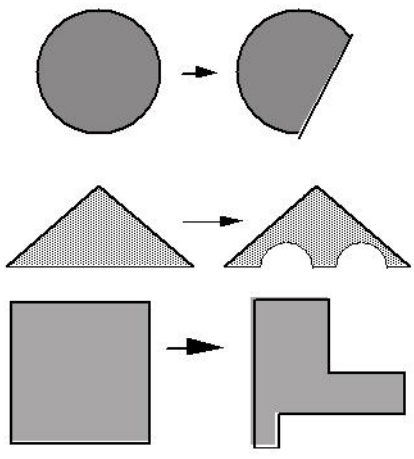
Always, sometimes or never true?

When you cut a piece of a shape, you reduce its area and perimeter.

What happens to the area and perimeter with these cuts?

A

What happens to the area and perimeter with these cuts?



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True, false or unsure?

When you roll a fair six-sided die, it is harder to roll a six than a four.	Scoring a total of three with two dice is twice as likely as scoring a total of two.
In a lottery, the six numbers 3, 12, 26, 37, 38, 40 are more likely to come up than the numbers 1, 2, 3, 4, 5, 6.	In a 'true or false' quiz with ten questions, you are certain to get five right if you just guess.
If a family has already got four boys, then the next baby is more likely to be a girl than a boy.	The probability of getting exactly three heads in six coin tosses is ½.