National Centre for Excellence in the Teaching of Mathematics

Always, sometimes or never true

Print out a copy of the card set on the next page. Cut out the cards.
Find someone to work with – perhaps a colleague or friend. They don't need to be a maths or numeracy teacher.
In your pair:

- choose a card
- work together to decide whether the statement is always, sometimes or never true and justify your reasoning:
  - If you consider a statement to be **always** true, explain how you know this.
  - If you think a statement is **sometimes** true, describe the cases when it is true and all the cases where it is false.

If you think a statement is **never** true, explain how you know this.

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Digits Numbers with more digits are greater in value.	**Add a nought** To multiply by ten, you just add nought on the right hand end of the number.
Pay rise Max gets a pay rise of 30%. Jim gets a pay rise of 25%. So Max gets the bigger pay rise.	**Sale** In a sale, every price was reduced by 25%. After the sale every price was increased by 25%. So prices went back to where they started.
Area and perimeter When you cut a piece off a shape you reduce its area and perimeter.	**Right angles** A pentagon has fewer right angles than a rectangle.
Birthdays In a group of ten learners, the probability of two learners being born on the same day of the week is one.	**Lottery** In a lottery, the six numbers 3, 12, 26, 37, 44, 45 are more likely to come up than the six numbers 1, 2, 3, 4, 5, 6.
Bigger fractions If you add the same number to the top and bottom of a fraction, the fraction gets bigger in value.	**Smaller fractions** If you divide the top and bottom of a fraction by the same number, the fraction gets smaller in value.
Square roots The square root of a number is less than or equal to the number.	**Consecutive numbers** If you add n consecutive numbers together, the result is divisible by n.