Use multiple representations of numbers and operations

- It means being able to use different forms of representation to **solve numerical problems** appropriately and flexibly.

- For example, represent acollection of numbers on the line numerical, expressing amultiplication of two numbers as the area of arectangle to estimate the result or comparing two fractions by representing them as parts-whole.

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Know and have ease with operations....

- It involves being able to compose and decompose numbers to estimate the result of an operation •
  For example, 28·52 =(25+ 3) ·(50+ 2), and subsequently estimate the result of 25·50.
- It also refers to understanding the relative effect of operations.
- For example, a
  person who understands the relative effect of operations does not need to do too much calculation to estimate the result of
  695 · 0.98, but rather intuits that the result will be alittle less than 695.
- It also involves relating the operations
- For example. express
  multiplication as the inverse operation of division: 20 · 1/2 =20 : 2.

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4. Detection in time

all stages

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Why is early identification so complicated?

What are the essential characteristics that we should know?

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Importance of early detection

- **At early ages, from the Infant Stage,** it can be observed if there is difficulty in numerical learning.
    - **The critical period for numerical learning is (4-7 years)**
    - It is vital to take advantage of brain plasticity at this stage.
    - Detection is vital for intervention and implementation of effective measures
- Progress indicators of this intervention
- Monitor **development** and assess competencies that must be acquired and consolidated in the EI
- **Recent research** identifies signs related to the presence of mathematical difficulties in PD, which are already evident in EI.

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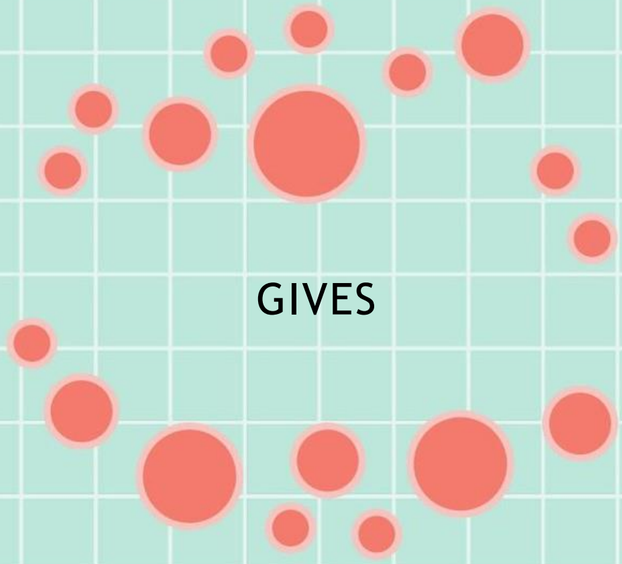
Detection process



Same process as that followed for the other Difficulties of Learning

Difficulties Specific to Learning

Math

Contextualize the DEAM

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Warning signs by stages

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Warning signs in the EI stage

ü Problems learning to count, does not maintain astable order ü Difficulty connecting a number to objects

ü When you compare two sets, you do not know how to decide which is the most big

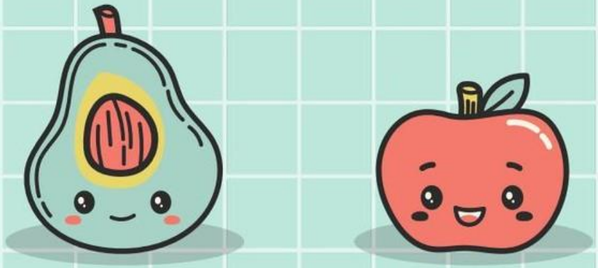
ü Does not perform simple mental operations (addition and/or subtraction up to 5)

ü Does not make small estimates, up to 10. ex: how many elements is there here?

ü Has difficulty recognizing patterns, such as from the smallest to the largest or tallest to shortest

Own adaptation. Sources: MathsExplained, the dyslexia association, Grabulosa

Follow series



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Warning signs in early childhood education

- Difficulty counting.
- They have not acquired any of the 5principles of numbering at 5years. Gelman and Gallistel (1978) and Gelman and Meck (1983)
- Errors in symbol and number recognition Arabic.
- Errors in writing or in the name of numbers less than 10 (confuse 6for 7; or six for seven).
- Difficulty classifying objects by shape or size.
- Confusions between major and minor sets (more than, less than...).

ÿ One-to-one correspondence

ÿ Stable order

ÿ Cardinality

ÿ Abstraction

ÿ Order irrelevance

https:// sites.google.com/ view/ discalculia/ p%C3%A1gina-principal?authuser=0