

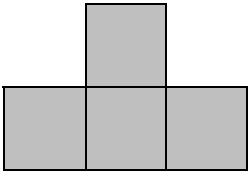
Santee Unified School District

MATHEMATICS PROFESSIONAL DEVELOPMENT

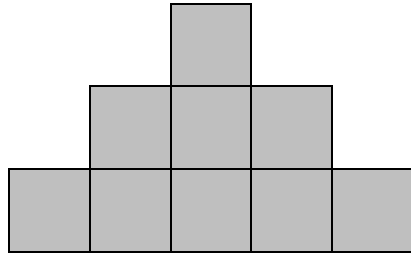


2014-15
Cycle 1

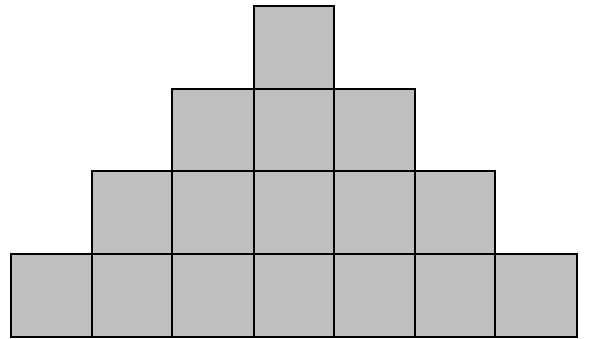
How do you see the shapes growing?



Case 1

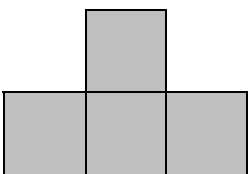


Case 2

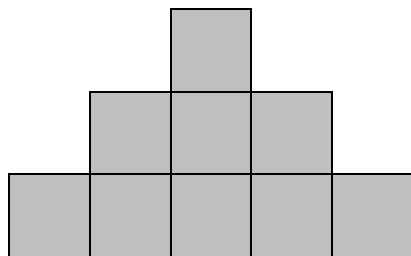


Case 3

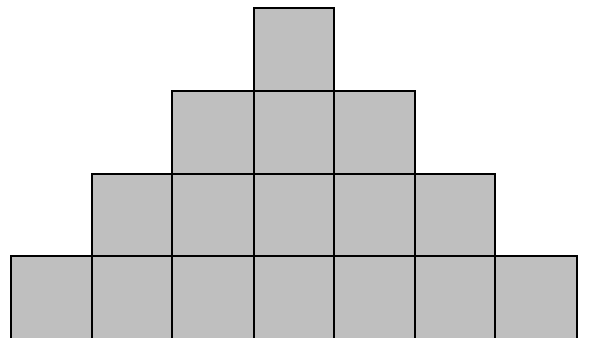
How many squares are in the 100th case?



Case 1



Case 2



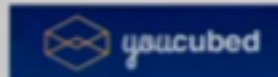
Case 3



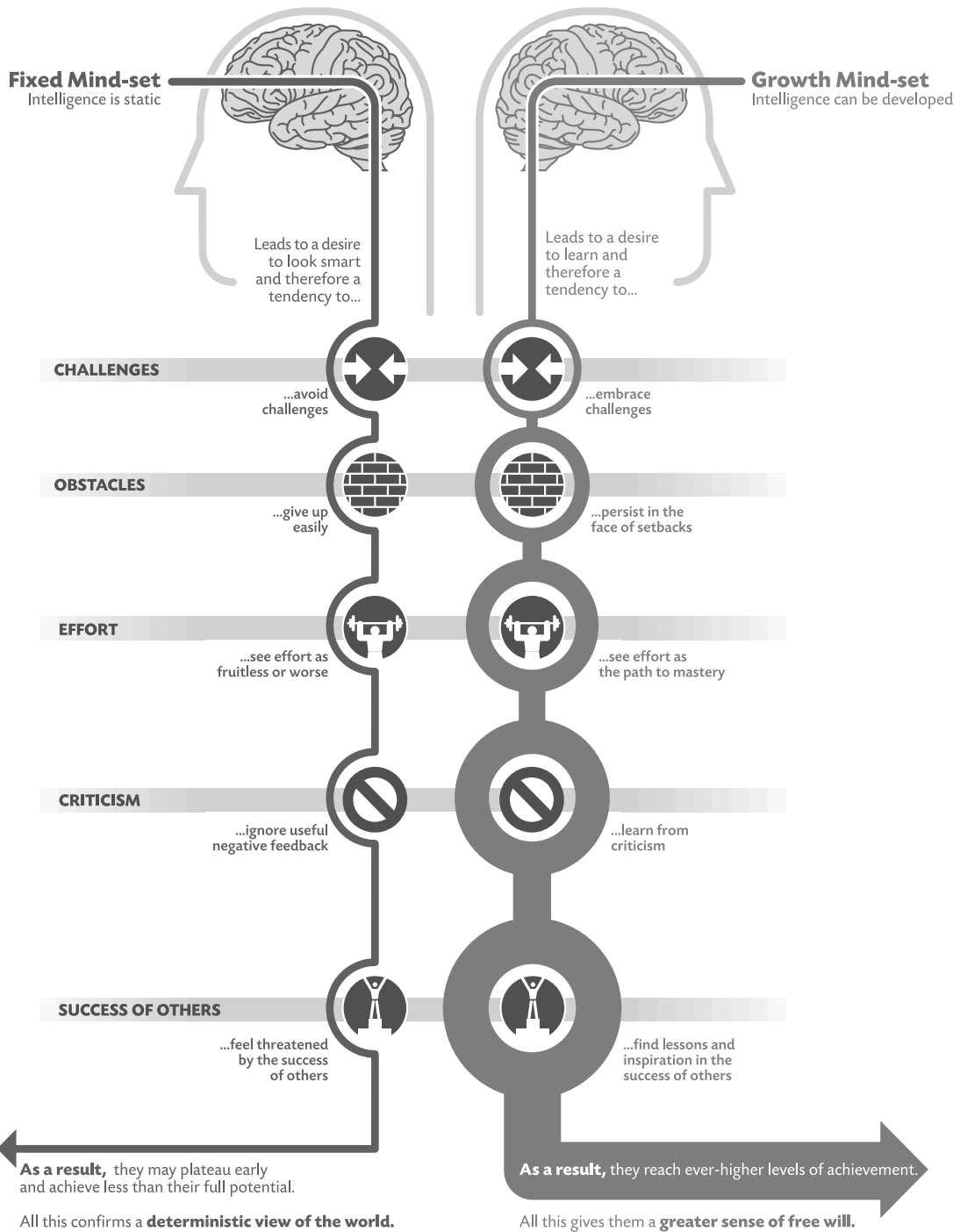
Why Students in the US need Common Core Mathematics



Jo Boaler
Professor of Mathematics Education
Stanford University,
Founder:



<https://www.youtube.com/watch?v=pOQW0hQgVPQ>



Source: http://www.stanfordalumni.org/news/magazine/2007/marapr/images/features/dweck/dweck_mindset.pdf

GRAPHIC BY NIGEL HOLMES

Basic Operations: MEANINGS AND REPRESENTATIONS

OPERATION: _____

What is the meaning of this operation? Is there more than one meaning? For *each different meaning*, please create the following:

- A visual model that illustrates your thinking about the meaning. You can use tools if you choose, and then make a sketch of your model.
- A numerical/symbolic statement that represents your model/thinking.
- A verbal statement that explains how you think about this meaning.
- An everyday life situation that would require thinking about subtraction according to this meaning.

VISUAL

NUMERICAL/SYMBOL

VERBAL

EVERYDAY LIFE

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Student Discourse Observation Tool

Procedures/Facts	Justification	Generalization
<ul style="list-style-type: none"> • Short answer to a direct question • Restating facts/statements made by others • Showing work/methods to others • Explaining what and how • Questioning to clarify • Making observations/connections 	<ul style="list-style-type: none"> • Explaining why by providing mathematical reasoning • Challenging the validity of an idea by providing mathematical reasoning • Giving mathematical defense for an idea that was challenged 	<p>Using mathematical relationships as the basis for:</p> <ul style="list-style-type: none"> • Making conjectures/predictions about what might happen in the general case or in different contexts • Explaining and justifying what will happen in the general case

Scripting of Student Discourse	Discourse Type P/F, J, or G

Scripting of Student Discourse

**Discourse Type
P/F, J, or G**

