

# MATHEMATICS AT OYSTER BAY



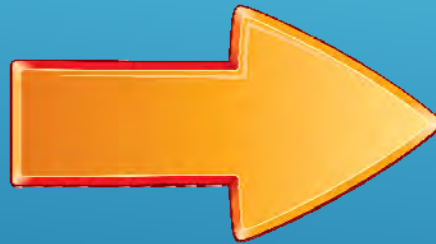
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March 5, 2019



# **New York State Standards for Mathematics**

2015



Now

# **Timeline for the Next Generation Learning Standards**

- Winter 2018 – Spring 2019: Raise awareness.  
Two-day 3 - 8 assessments measure 2011 Common Core Standards.
- Spring 2019 – Summer 2020: Build capacity.  
Two-day 3 – 8 assessments measure 2011 Common Core Standards.
- September 2020: Full implementation of NYS Next Generation Learning Standards in grades Pre K - 8
- Spring 2021: New grade 3 – 8 tests measuring the Next Generation Learning Standards
- High school courses and Regents exam implementation date still unknown.

# **What are the Next Generation Learning Standards?**

The Next Generation Learning Standards are built upon:

- 1) Revisions
- 2) Additions
- 3) Vertical Movement
- 4) Clarification

of the Common Core Learning Standards

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# What is going to change?

## Grades K - 2

Grade	New Standards	Moved Standards	Highlights and Instructional Considerations*
K	2	None	10
1	3	None	6
2	None	None	10

*\*Highlights and Instructional Considerations include examples, notes, and charts.*

# What is going to change? Grades 3 - 5

Grade	New Standards	Moved Standards	Highlights and Instructional Considerations*
3	2	None	11
4	None	None	10
5	None	None	9

*\*Highlights and Instructional Considerations include examples, notes, and charts.*

# What is going to change? Grades 6 - 8

Grade	New Standards	Moved Standards	Highlights and Instructional Considerations*
6	8*	None	21
7	1	3 (to 6 <sup>th</sup> grade)	14
8	None	1 (to Algebra 1)	17

*\*Highlights and Instructional Considerations include examples, notes, and charts.*

# What is going to change? High School

Grade	New Standards	Moved Standards	Highlights and Instructional Considerations*
Algebra 1	3	6	12
Geometry	2	1	14
Algebra 2	5	12	5

*\*Highlights and Instructional Considerations include examples, notes, and charts.*



# What are we doing at OBEN?



# Theodore Roosevelt School

NY-1.OA

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction.

- Use addition and subtraction within 20 to solve one step word problems involving situations of adding to, taking from, putting together, taking apart, and/or comparing, with unknowns in all positions.

**Note:** Problems should be *represented* using objects, drawings, and equations with a symbol for the unknown number. Problems should be *solved* using objects or drawings, and equations.

Grade K Grade 1 Grade 2

**Coherence:** NY-K.OA.2 → NY-1.OA.1 → NY-2.OA.1

In the chart below, the four unshaded (white) subtypes are mastered in Kindergarten. Grade 1 and 2 students work with all subtypes. *Darker shading indicates the four difficult subtypes that students should work with in Grade 1 but need not master until Grade 2.*

		Result Unknown	Change Unknown	Start Unknown
Action Situations	Add To	<p>A bunnies sat on the grass. B more bunnies hopped there. How many bunnies are on the grass now?</p> $A + B = \square$	<p>A bunnies were on the grass. Some more bunnies hopped there. Then there were C bunnies. How many bunnies hopped over to the first A bunnies?</p> $A + \square = C$	<p>Some bunnies were sitting on the grass. B more bunnies hopped there. Then there were C bunnies. How many bunnies were on the grass before?</p> $\square + B = C$
	Take From	<p>C apples were on the table. I ate B apples. How many apples are on the table now?</p> $C - B = \square$	<p>C apples were on the table. I ate some apples. Then there were A apples. How many apples did I eat?</p> $C - \square = A$	<p>Some apples were on the table. I ate B apples. Then there were A apples. How many apples were on the table before?</p> $\square - B = A$

# Vernon School

## Grade 3:

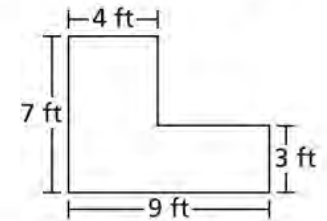
7 A bulletin board can be covered completely by 30 square pieces of paper without any gaps or overlaps. If each piece of paper has side lengths of 1 foot, what is the total area of the bulletin board?

- A 1 foot
- B 30 feet 24%
- C 1 square foot
- D 30 square feet 63%

17 Joe and Mike both ran the same race. Joe finished the race 4 minutes before Mike. If Mike finished the race at 4:02 p.m., what time did Joe finish the race?

- A 3:58 p.m. 17%
- B 4:06 p.m. 83%
- C 8:02 p.m. 0%
- D 12:02 p.m. 0%

31 The shape of Cindy's flower garden is shown below.



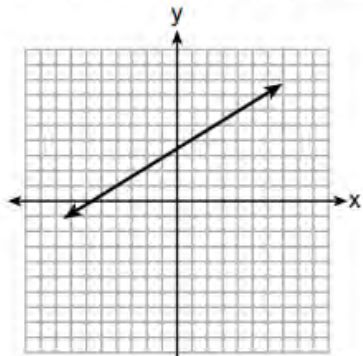
What is the area, in square feet, of Cindy's flower garden?

- A 23 23%
- B 32 12%
- C 43 43%
- D 47 21%

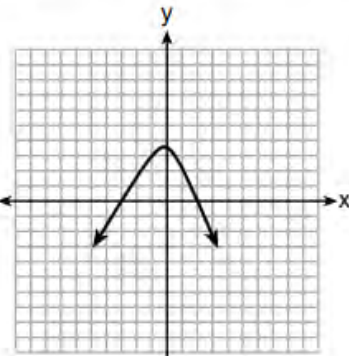
# Oyster Bay High School

## Algebra 1:

20 Which graph does not represent a function that is always increasing over the entire interval  $-2 < x < 2$ ?

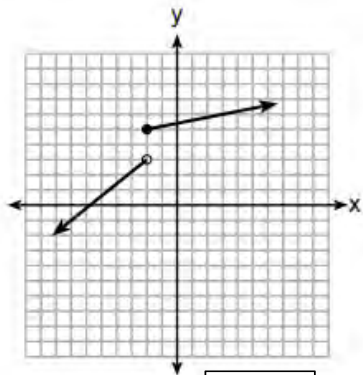


(1)



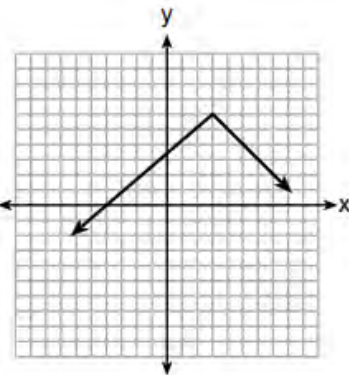
(3)

56%



(2)

28%



(4)

## Algebra 2:

2 Which statement is true about the graph of  $f(x) = \left(\frac{1}{8}\right)^x$ ?

(1) The graph is always increasing.

(2) The graph is always decreasing.

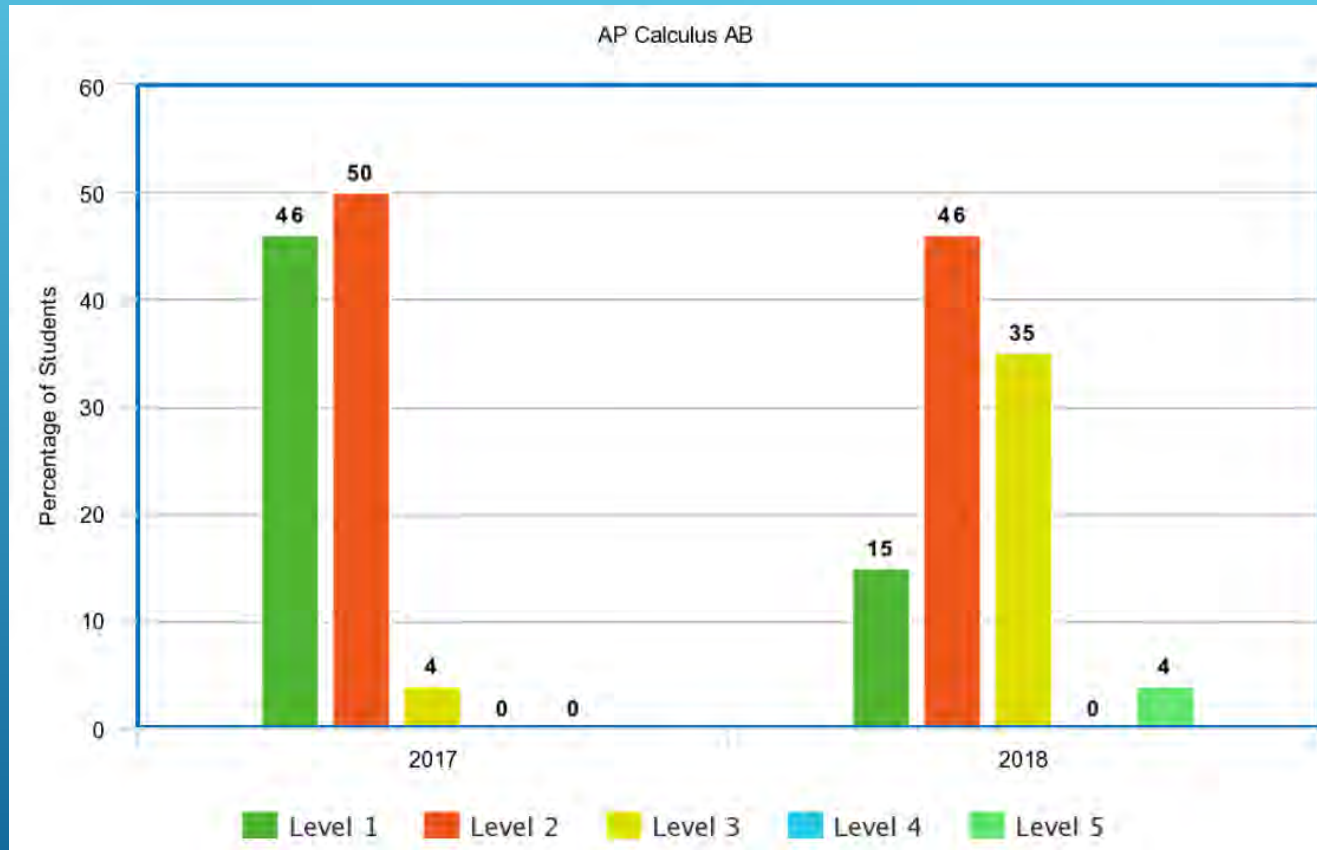
(3) The graph passes through  $(1,0)$ .

(4) The graph has an asymptote,  $x = 0$ .

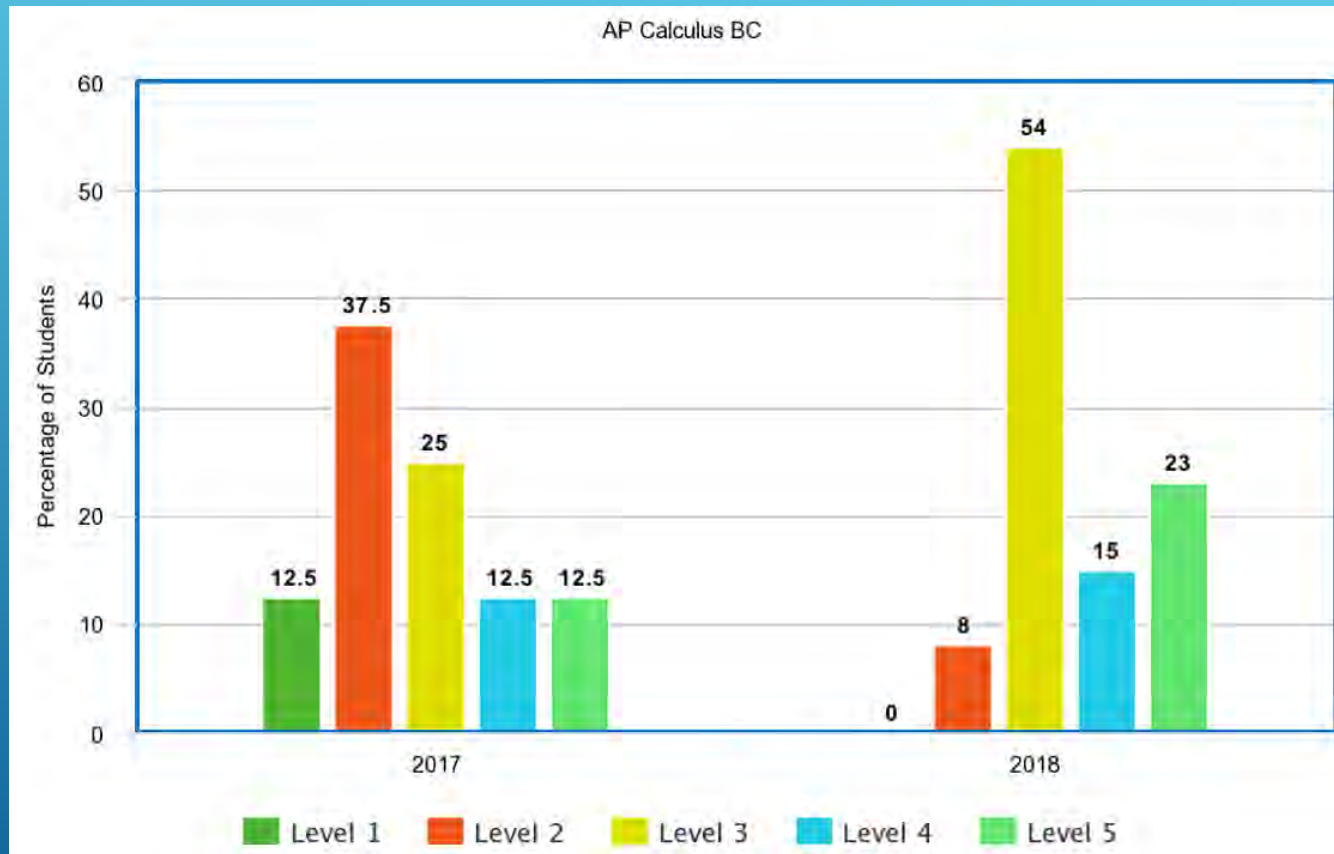
44%

35%


# AP Calculus AB




# AP Calculus BC



## **Advanced Placement Focus:**

1. Increase teacher access to professional development
  2. Improve test preparation
  3. Use data to identify gaps in student comprehension
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# **Advanced Placement Test Preparation**

- Embedded AP test questions
  - Online resources
  - Data
  - Review classes
  - Practice exams
- 
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# Algebraic Manipulation that requires precise attention to detail

## Algebra 2 Honors

2) Factor completely:  $3y^3 - 12y^2 + 6y - 24$

- (A)  $(y^2 + 2)(y - 4)$                       (C)  $(y + 2)(y - 2)(y - 4)$   
(B)  $3(y^2 + 2)(y - 4)$                       (D)  $3(y + 2)(y - 2)(y - 4)$

## Algebra 2

1) Express in standard form:  $-(6 - a)^2$

- (A)  $a^2 - 12a + 36$                                       (C)  $-a^2 + 12a - 36$   
(B)  $a^2 + 12a - 36$                                       (D)  $a^2 + 36$

## Pre-Calculus

If  $f(x) = \sqrt{3x^2 - 11}$  and  $g(x) = 2x$ , find  $f(g(x))$ .

- a.  $f(g(x)) = \sqrt{12x^2 - 11}$   
b.  $f(g(x)) = \sqrt{6x^2 - 11}$   
c.  $f(g(x)) = 2\sqrt{3x^2 - 11}$   
d.  $f(g(x)) = 6x^2 - 22$

# Technology in the Mathematics Classroom



# Extra Curricular Activities at OBEN

- Mathletes
- Math Olympiad



- Mu Alpha Theta



# Extra Curricular Activities at OBEN

- Vernon Math Team
  - Kindergarten Math Night



# Going Forward...

