

MATH TALKS

Math Talk

Equation Detective

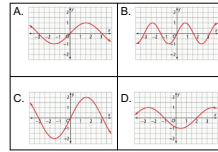
Can you figure out the value of k ?

$$(x+1)(x+k) = x^2 + 4x + 3$$

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Math Talk

Which One Doesn't Belong?



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Math Talk

Equation Detective

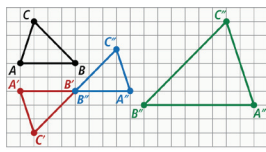
Describe and correct the errors a student made when simplifying the expression $\frac{2^3 \cdot 2^5}{2^{-1}}$.

$$\begin{aligned} \frac{2^3 \cdot 2^5}{2^{-1}} &= \frac{2^{3+5}}{2^{-1}} \\ &= \frac{2^8}{2^{-1}} \\ &= 2^{8-1} \\ &= 2^7 \end{aligned}$$

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Math Talk

Slow Reveal Graphs (Slide 4 of 4)



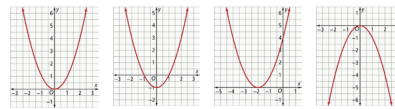
What do you notice? What do you wonder?

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Math Talk

Slow Reveal Graphs (Slide 4 of 4)

What do you notice? What do you wonder?



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Math Talk

Find a Rule

Equation	Roots
$x^2 - 1 = 0$	1, -1
$x^2 - 4 = 0$	2, -2
$x^2 - 9 = 0$	3, -3
$x^2 - 16 = 0$	4, -4

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Data Talk

Every Picture Tells a Story

Create a histogram with the following data set. Begin by labeling the x- and y-axes.

0-1	9.07179533
1-2	21.7723088
2-3	26.1267705
3-4	20.9014164
4-5	12.5408499
5-6	6.01960793
6-7	2.40784317

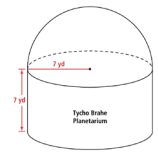
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Math Talk

Every Picture Tells a Story

Describe the characteristics of the figure shown.

Create a word problem that would reference this figure.



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Implementing a Math Talk

A Math Talk is a 5 to 10 minute, whole-class activity provided with every lesson.

- **Present a problem** to the whole class that can be solve mentally in a few minutes. Each problem is on a slide that is pictured in the Teacher's Edition.
- **Have students work independently** on the problem for a brief time.
- **Have students share their methods** aloud and compare methods so that they can refine their own approaches, possibly noting and analyzing any error they may have made. These whole-class conversations increase students' capacity for collaborative, interpretive, and productive communication.
- **Use the Math Talk any time** before, with, or after the lesson.

Math Talk Routines

Each Math Talk uses one of the following routines.

- **Which One Doesn't Belong?** has multiple answers. Students learn to compare and contrast various attributes of objects, numbers, figures, graphs, etc.
- **Slow Reveal Graph** adds information to a number line, graph, or data display, students refine their interpretations.
- **Equation Detective** evaluate the validity of worked examples or find a mistake, and justify their findings.
- **Find a Rule** reinforces interpretation and inductive reasoning where students make conjectures on a rule that describes a set of numbers or categories.
- **Every Picture Tells a Story** asks students to analyze and make sense of graphs or data displays, connecting mathematics with real-life scenarios.