MATH TALKS

Math Talks refer to a collection of prompts and visuals used to elicit a variety of student thinking and problem-solving strategies during whole-class discussion. The Math Talks included in *MathLinks* are categorized as Data Talks, Number Talks, Picture Talks, and Dot Talks.

Go to Unit Resources → <Unit Number> → Other Resources → Math Talks

Why: Math Talks provide talking and listening opportunities for students to make sense of mathematics in different ways. Most Math Talks offer multiple avenues for access and entry into the prompt. The sharing process helps to create an environment of acceptance of others' ideas, and helps students see mathematics from a variety of perspectives.

Launch the activity:

- Allow approximately 10 minutes for each of the Math Talk examples, although time can vary depending upon the prompt and the student input.

- Project a Math Talk slide from the slide deck to the entire class. Most Math Talks occur without any tools (paper, pencil, calculator, etc.), but it is up to the teacher to decide.

Go to Unit Resources → <Unit Number> → Other Resources → Math Talks

- Encourage students to direct questions to the teacher and each other, agree with ideas and add extensions, disagree courteously, offering support for a different idea, float conjectures, and explain thinking.

- Teachers should always acknowledge effort as positively as possible ("Thank you for that contribution.") and encourage peer assessment and discussion ("What do you say to Maria about her conjecture?").

Accountability/Follow up Ideas:

- Math Talks offer excellent formative assessment opportunities. Use Math Talks to decide which students may need further instruction or more practice with a concept. Base future Math Talks on the results of recently completed ones.

MATH TALK (DOT TALK EXAMPLES)

Image A

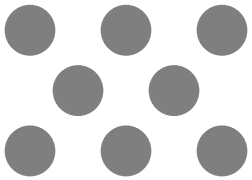


Image B

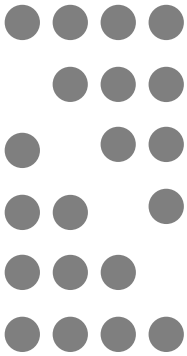
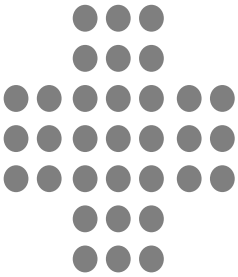


Image C



A Dot Talk is a visual, engaging introduction to the protocols for Math Talks for students of all abilities. It is a way to emphasize that there are many different ways to see mathematics (pictures, numbers, symbols, words). Introduce one image per day and discuss.

Without counting one by one, how many dots do you see?

How do you see them?

What numerical expressions could we write to describe the total number of dots?

Image A:

8 dots

Expressions will vary. One possibility: 2(3) + 2

Image B:

20 dots

Expressions will vary. One possibility: 2(4 + 3 + 2 + 1)

Image C:

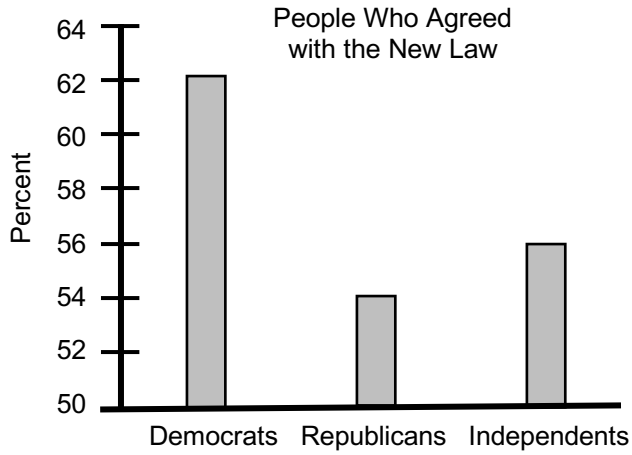
33 dots

Expressions will vary. One possibility: 3(7) + 2(3) + 2(3)

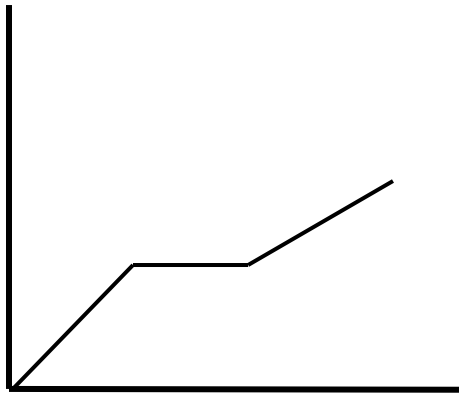
MATH TALK (DATA TALK EXAMPLES)

- Graph interpretation is essential for quantitative literacy. Graph talks give students a chance to interpret and analyze graphs, and make claims. Discuss one graph per day. Look for graphs depicting data about current issues. Bring them to class to discuss as well.

Graph A



Graph B



Graph A Sample Questions	Graph 2 Sample Questions
What do you notice? ***What do you wonder?*** ***What is the topic of the graph?*** ***Do you think someone might be misled by this graph? Why?*** ***If you had to make a prediction based on this graph, what would you predict?***	***What do you notice?*** ***What do you wonder?*** ***What could this graph be about (what could be a reasonable title and labels for the axes)?*** ***What could this graph NOT be describing?***

Graph A:

Topic: People who agree with a new law

Misleading: This could be misleading because we do not know how many Democrats, Republicans, or independents were surveyed.

Prediction: Democrats like the law more than Republicans.

Graph B:

Not describing: Any non-functional relationship such as height vs. age