

## Number Talks

**There is no wrong way to conduct a number talk.** Be patient with yourself and your students as you begin doing them. The purpose is to encourage students to think and talk about mathematics by explaining what makes sense to them. Your role is to facilitate and record.




“Our classrooms are filled with students and adults who think of mathematics as rules and procedures to memorize without understanding the numerical relationships that provide the foundation for these rules.” Number Talks, page 4

### Tips for Facilitating

<p>A student gives a complicated method for solving a problem that you don't understand. →</p>	<p>Have the student repeat. If it is still difficult to follow their logic, circle what you have written so far. Instead of slowing the class conversation, tell the student you need more time to think about it and move on. Later meet with the child privately to explain/clarify.</p>
<p>No one offers an answer/strategy, or they are relying on strategies that are less efficient or not applicable. →</p>	<p>You might refer them to charts with previously demonstrated strategies and encourage them to try one. Or, offer a strategy from a <i>previous student</i> (even if fictional). Ask them if they think that might work.</p>
<p>Number talks are taking much longer than 15 minutes. →</p>	<p>Use a timer or plan your number talk to start 15 minutes before a bell (recess, lunch, dismissal, etc.). Only do one part of a string and/or use an easier problem until students are comfortable and quicker with the routine.</p>

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## Number Talks

Before	During	After
<ul style="list-style-type: none"> <li>Plan for problems for which a particular strategy is useful.</li> <li>Try to anticipate other strategies and prepare for how you might illustrate or name them.</li> </ul> <p>Discussion/Norms:</p> <ul style="list-style-type: none"> <li>No calling out.</li> <li>Listen to others and how they got their answer.</li> <li>No laughing at answers they think are incorrect or silly. We learn from the thinking of others.</li> </ul> <p>Establish signals that might include:</p> <ul style="list-style-type: none"> <li>Fist to chest while thinking.</li> <li>Thumb up when they have an answer and can explain it.</li> <li>Another finger up if they have another one way to get to the answer.</li> <li>Point to self with thumb if you have the same answer “same”</li> <li>Sign for “no” (pinching motion) I have a different answer or a different way to solve.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>	<ul style="list-style-type: none"> <li>Keep it moving (5 to 15 minutes).</li> <li>Write problems horizontally.</li> <li>Solicit answers and have students defend/prove/justify the answer.</li> <li>Keep a neutral face when students say the wrong answer.</li> <li>Let many students explain how they solved the problem</li> <li>Ask if others solved it the same way (look for “me too” and “no” signals)</li> <li>Name and write the strategies.</li> <li>Illustrate the strategies using equations, number lines, or drawings.</li> <li>It’s ok if you don’t get through all the problems you planned.</li> </ul> <p>Encourage student to student dialogue and listening by having students restate what another student said in their own words, and ask:</p> <ul style="list-style-type: none"> <li>Do you agree? Disagree? Why?</li> <li>Does anyone have the same answer but a different way to explain it?</li> <li>How could you prove/demonstrate/justify that?</li> </ul>	<ul style="list-style-type: none"> <li>Make note of the strategies students were using.</li> <li>Make note of misconceptions to challenge in future number talks.</li> <li>Develop/find the next set of problems.</li> <li>Create a chart and post with strategy illustrated and labeled.</li> <li>Refer students to the chart when appropriate.</li> </ul>