## Support productive struggle in learning mathematics Teacher and student actions

## What are teachers doing?

Anticipating what students might struggle with during a lesson and being prepared to support them productively through the struggle.

Giving students time to struggle with tasks, and asking questions that scaffold students' thinking without stepping in to do the work for them.

Helping students realize that confusion and errors are a natural part of learning, by facilitating discussions on mistakes, misconceptions, and struggles.

Praising students for their efforts in making sense of mathematical ideas and perseverance in reasoning through problems.

## What are students doing?

Struggling at times with mathematics tasks but knowing that breakthroughs often emerge from confusion and struggle.

Asking questions that are related to the sources of their struggles and will help them make progress in understanding and solving tasks.

Persevering in solving problems and realizing that is acceptable to say, "I don't know how to proceed here," but it is not acceptable to give up.

Helping one another without telling their classmates what the answer is or how to solve the problem.