



# Implement tasks that promote reasoning and problem solving

## What is it?

Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.

## Additional Information

Not all tasks provide the same opportunities for student thinking and learning.

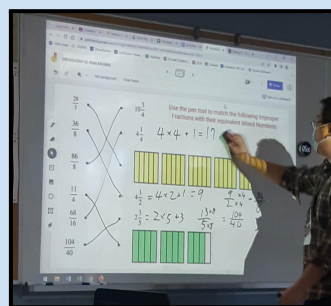
Student learning is the greatest in classrooms where tasks consistently encourage high-level student thinking and the least in classrooms where tasks are routinely procedural in nature.

## What are teachers doing?

- ✓ Motivating students' learning of mathematics through opportunities for exploring and solving problems that build on and extend their current mathematical understanding.
- ✓ Selecting tasks that provide multiple entry points through the use of varied tools and representations.
- ✓ Posing tasks on a regular basis that require a high level of cognitive demand.
- ✓ Supporting students in exploring tasks without taking over student thinking.
- ✓ Encouraging students to use varied approaches and strategies to make sense of and solve tasks.



## What are students doing?



- ✓ Persevering in exploring and reasoning through tasks.
- ✓ Taking responsibility for making sense of tasks by drawing on and making connections with their prior understanding and ideas.
- ✓ Using tools and representations as needed to support their thinking and problem solving.
- ✓ Accepting and expecting that their classmates will use a variety of solution approaches and that they will discuss and justify their strategies to one another.