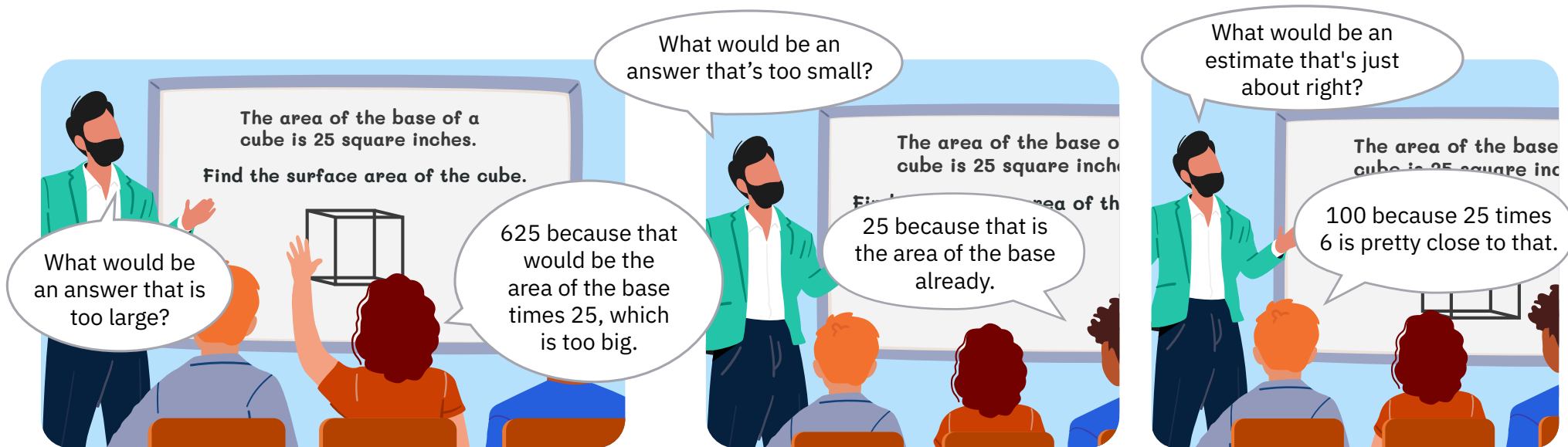


Wrong Two Ways

Sometimes being wrong is actually the right way forward.

For any numerical task, ask students to provide two answers that are clearly incorrect (too large, too small) and an estimate that is pretty close. Have them explain the reasoning behind each response.



Why Try It



This nudge strengthens number sense by having students **estimate** solutions that are too large, too small, and just right. It helps students prepare for **problem solving** and it encourages them to think critically and **justify** their reasoning.

MLR 4: Information Gap

Students work together to estimate a range for the solution, then revisit and refine their ideas. It increases motivation to revisit both the solution and their initial estimates.

Teacher Notes

- You can do this in small groups, where students select which estimate to provide: too large, too small, or just right.
- Encourage group discussion to refine their reasoning without immediately writing down guesses.
- Students should revisit and discuss estimates after completing the task.



Caution

Students may try to solve the problem first and then give parameters. Encourage them to think through possible estimates prior to solving the problem.