

Standards for Mathematical Practice

Parents' Guide

As your son or daughter works through homework exercises, you can help him or her develop skills with these Math Practice Standards by asking some of these questions:

1. Make sense of problems and persevere in solving them.

- What are you solving for in the problem?
- Can you think of a problem that you have solved before that is like this one?
- How will you go about solving it? What's your plan?
- Are you making progress toward solving it? Should you try a different plan?
- How can you check your answer? Can you check using a different method?

2. Reason abstractly and quantitatively.

- Can you write or recall an expression or equation to match the problem situation?
- What do the numbers or variables in the equation refer to?
- What's the connection among the numbers and the variables in the equation?

3. Construct viable arguments and critique the reasoning of others.

- Tell me what your answer means.
- How do you know that your answer is correct?
- If I told you I think the answer should be (*offer a wrong answer*), how would you explain to me why I'm wrong?

4. Model with mathematics.

- Do you know a formula or relationship that fits this problem situation?
- What's the connection among the numbers in the problem?
- Is your answer reasonable? How do you know?
- What does the number(s) in your solution refer to?

5. Use appropriate tools strategically.

- What tools could you use to solve this problem? How can each one help you?
- Which tool is more useful for this problem? Explain your choice.
- Why is this tool (*the one selected*) better to use than (*another tool mentioned*)?
- Before you solve the problem, can you estimate the answer?

6. Attend to precision.

- What do the symbols that you used mean?
- What units of measure are you using? (*for measurement problems*)
- Explain to me (*a term from the lesson*).

7. Look for and make use of structure.

- What do you notice about the answers to the exercises you've just completed?
- What do different parts of the expression or equation you are using tell you about possible correct answers?

8. Look for and express regularity in repeated reasoning.

- What shortcut can you think of that will always work for these kinds of problems?
- What pattern(s) do you see? Can you make a rule or generalization?