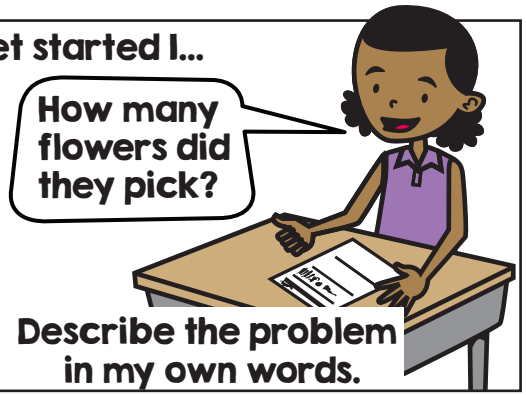
# Make sense of problems and persevere in solving them. MP.1

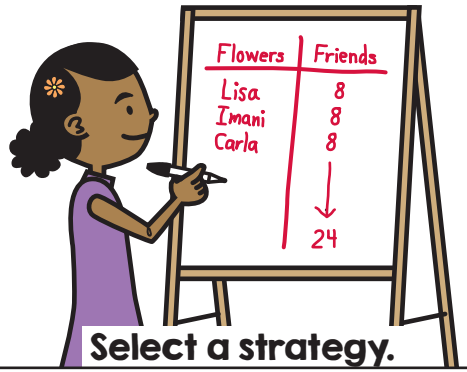
**I can choose strategies for solving a problem and checking my answers.**

**To get started I...**




Describe the problem in my own words.

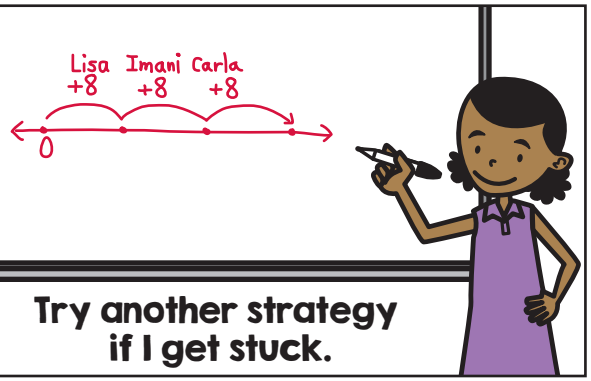
Decide what information I need.



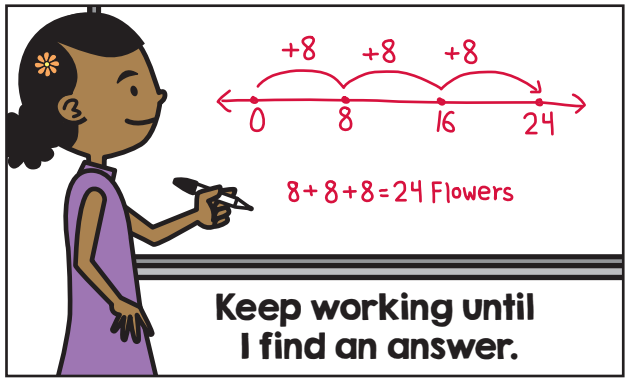

Select a strategy.

**While I'm working I...**

Follow my plan to solve the problem.

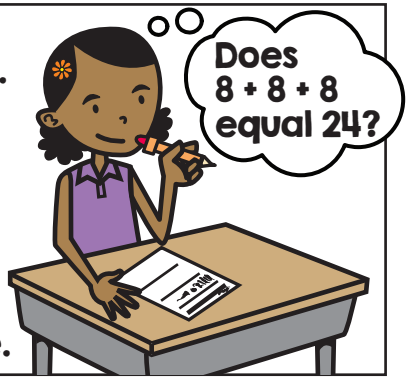



Try another strategy if I get stuck.

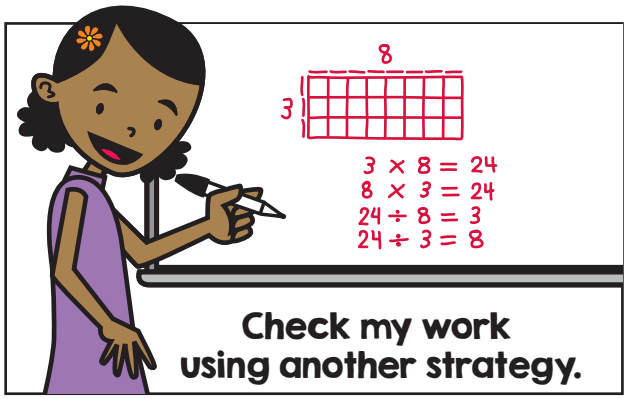



Keep working until I find an answer.

**When I have an answer I...**




Ask if it makes sense.




Check my work using another strategy.

Check with a partner. If our answers differ, I figure out why.

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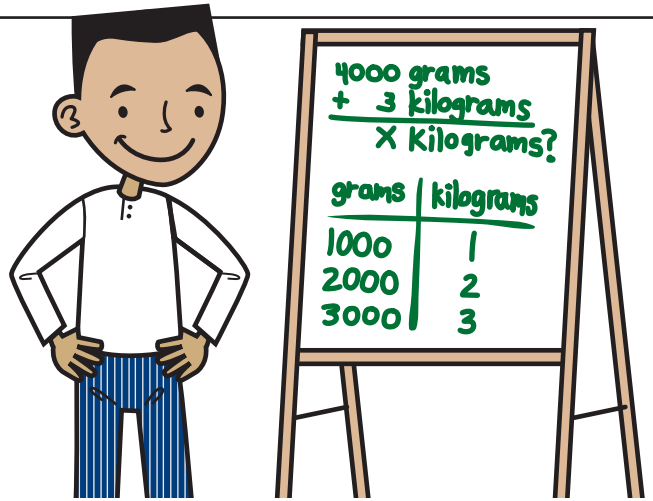
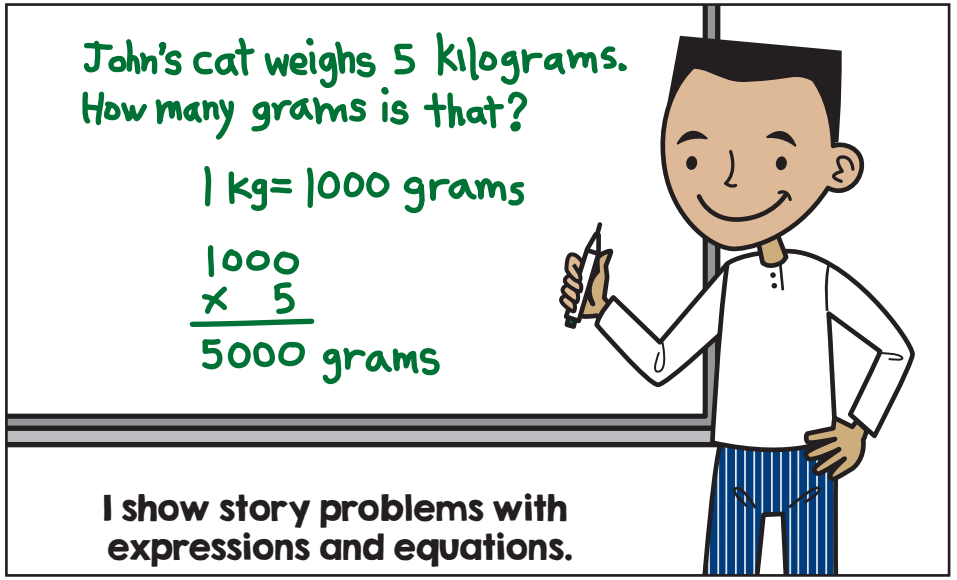
# Reason abstractly and quantitatively.

MP. 2

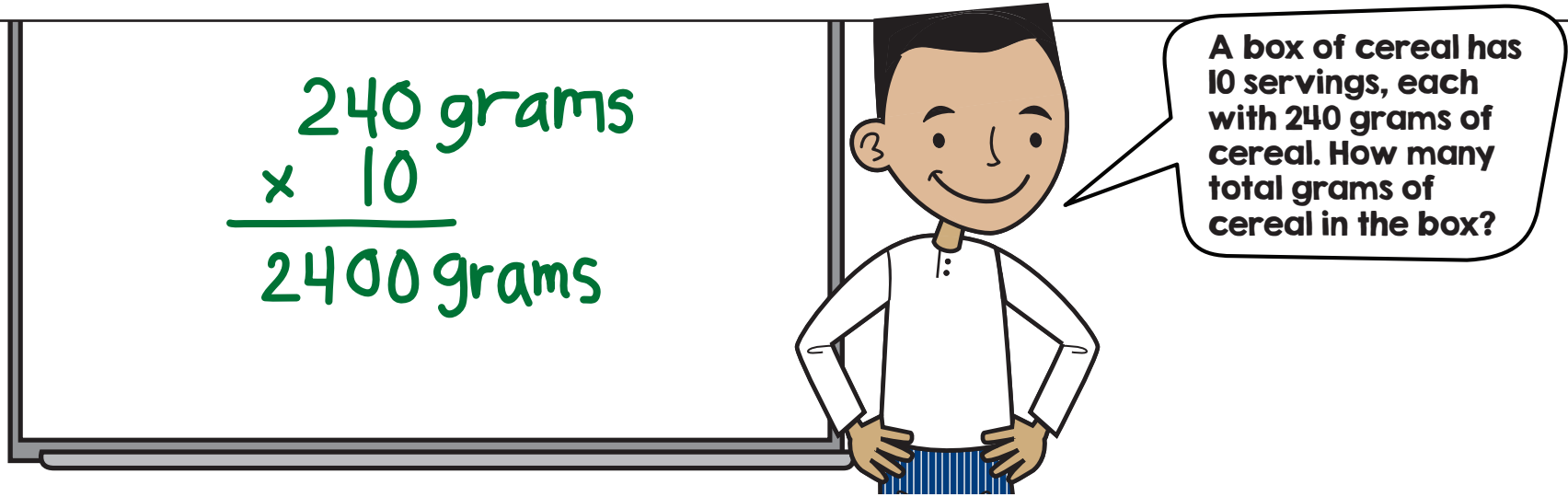
I can represent math problems in a variety of ways and think about what the problems mean.




I show my thinking with labeled sketches, charts, or diagrams.




I show story problems with expressions and equations.




I come up with a story to describe an expression or equation.

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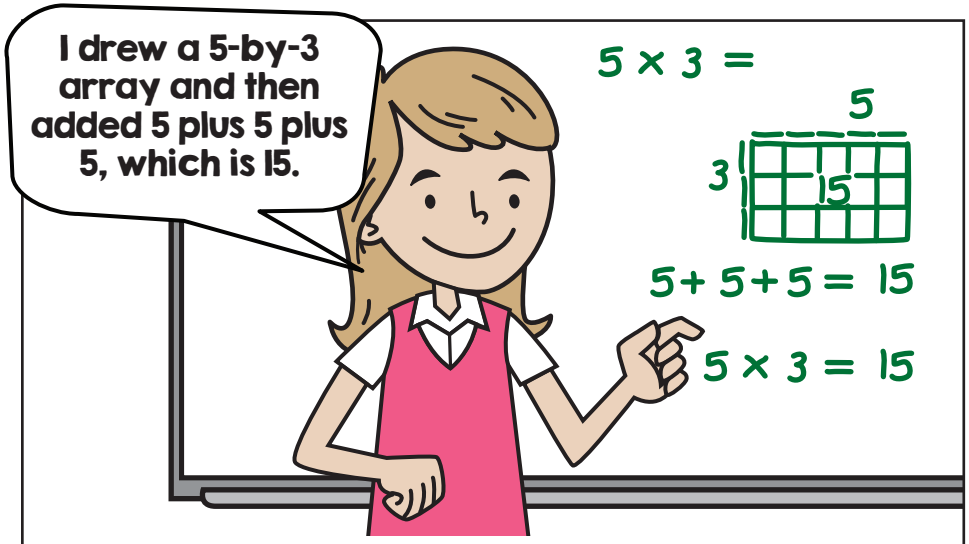
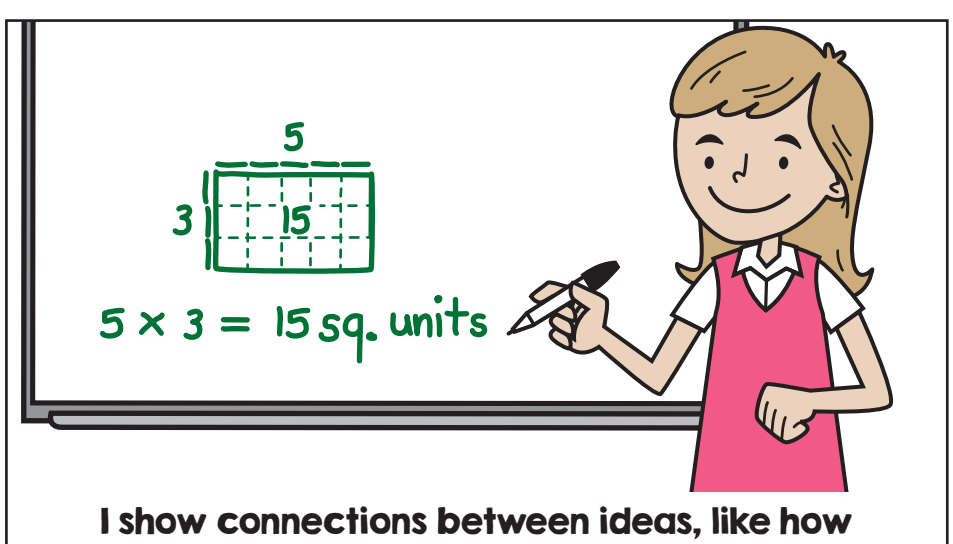
# Construct viable arguments and critique the reasoning of others. MP. 3

I share ideas, explain my thinking, and analyze others' ideas.

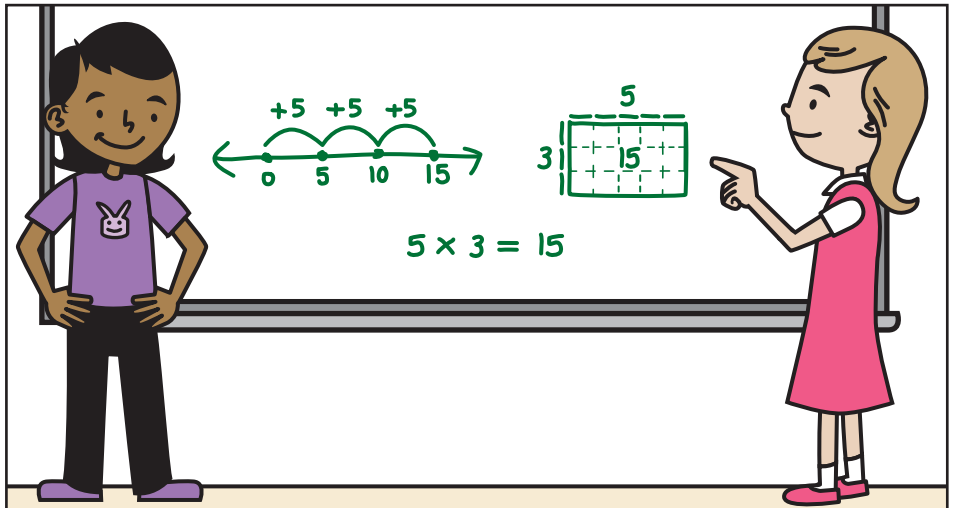



I explain how I got the answer.




I show connections between ideas, like how the area of a rectangle is related to multiplication.

I ask others to explain how they got an answer or why they chose their strategy.




I compare my strategy to someone else's.

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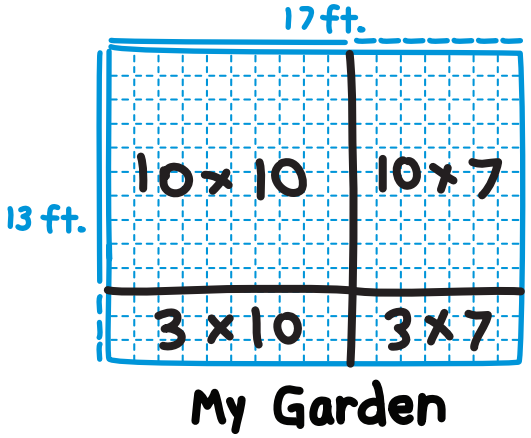
# Model with mathematics.

MP. 4

I can see math in the world around me.
I can use math to answer questions and gain insight about situations and problems.

I can use the array I sketched to figure out the exact area. But I also can see right away that it's going to be a bit more than 200 square feet.




I use diagrams and numbers to represent situations mathematically. I think carefully about what those diagrams and numbers can tell me about the situation.

| 1 | 2 | 4 | 8 |
|---|---|---|---|
| $\frac{3}{4}$ | $1\frac{1}{2}$ | 3 | 6 |

8 $\frac{3}{4}$-cups will make 6 cups of water.

I need 6 cups to make the juice. How can I use this $\frac{3}{4}$-cup to measure out 6 cups of water?

I represent situations with mathematics and use my representations to solve problems efficiently.

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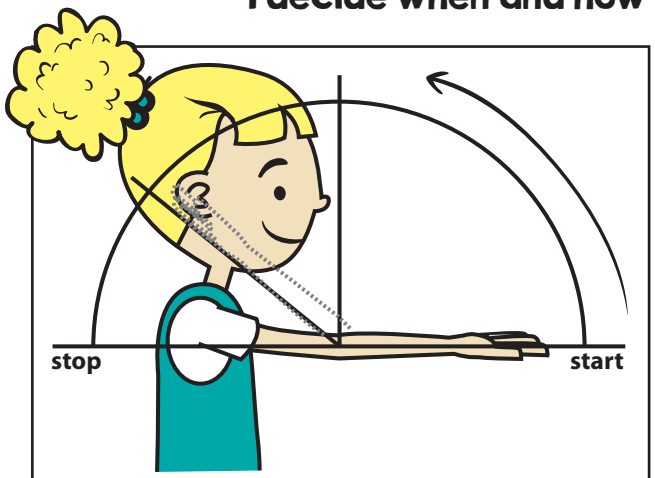
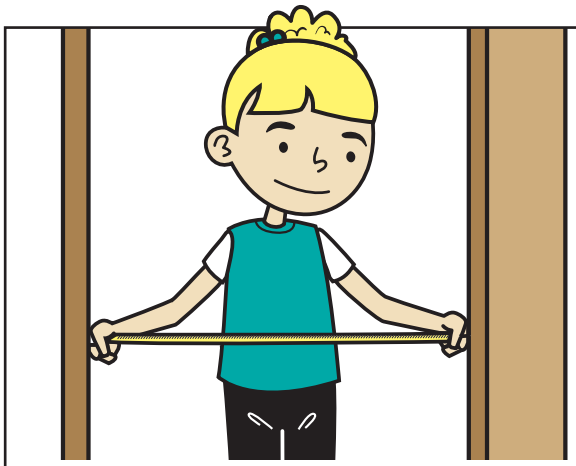
# Use appropriate tools strategically.

MP. 5

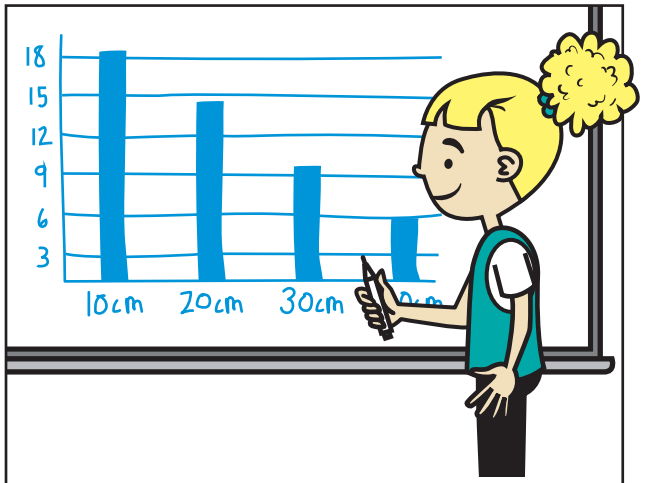
I decide when and how to use math tools, pictures, and models to help solve problems.



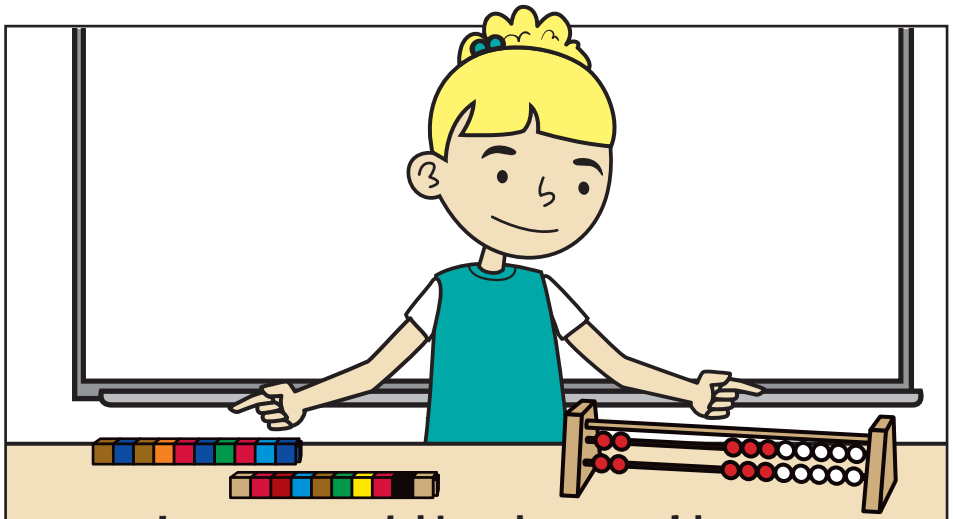

I know when I can estimate and when I need to find the exact answer.



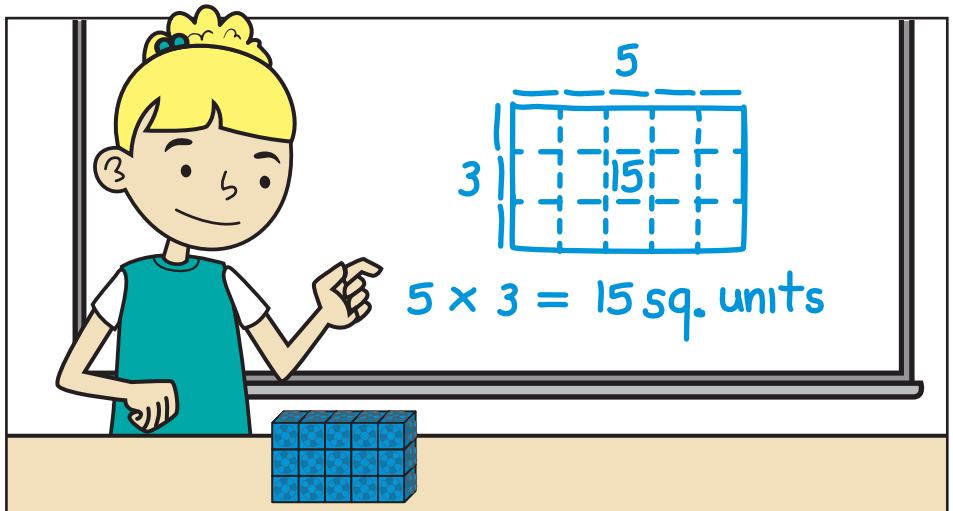
I use tools like rulers and meter sticks to compare units of measure.




I represent and explain data with graphs.



I use one model to solve a problem and a different model to check my answer.




I determine whether the tool I selected makes sense.

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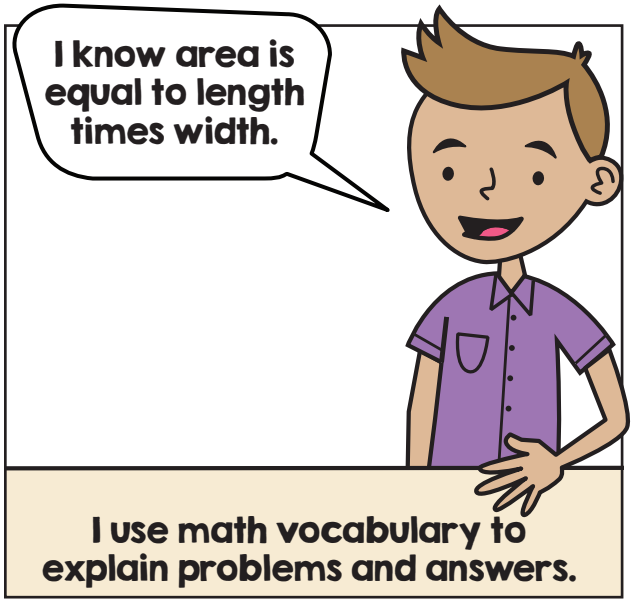
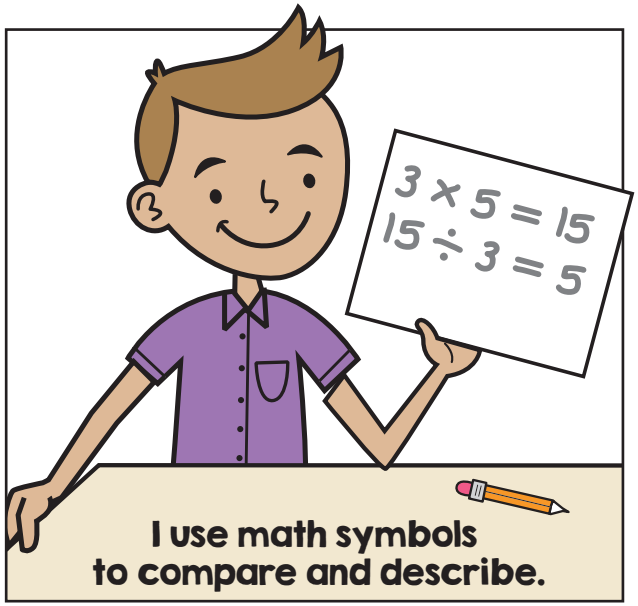
# Attend to precision.

MP. 6

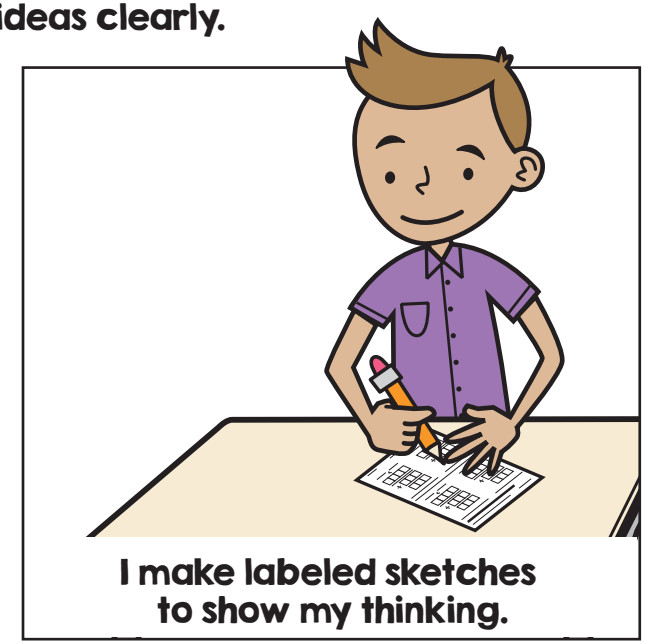
I can be mathematically precise and describe my ideas clearly.



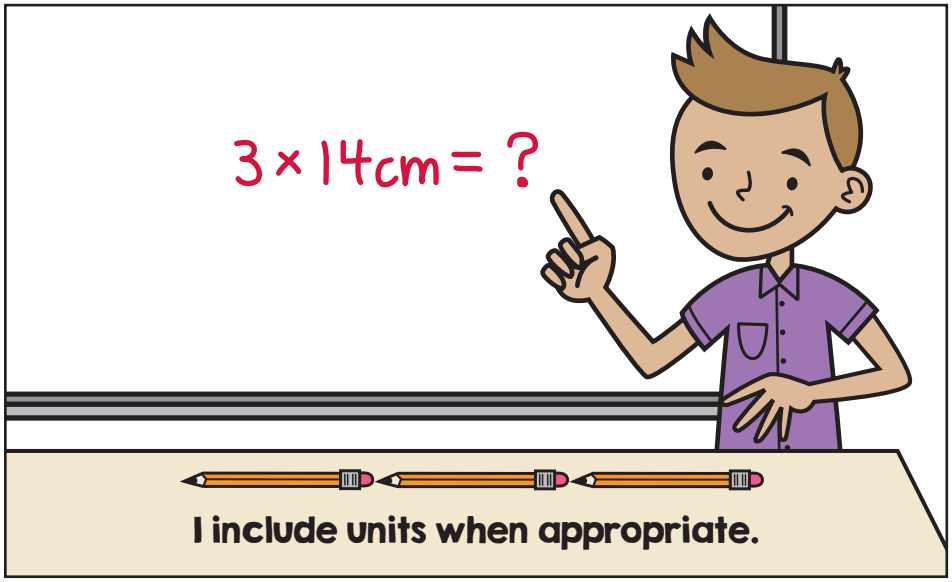

I use math vocabulary to explain problems and answers.



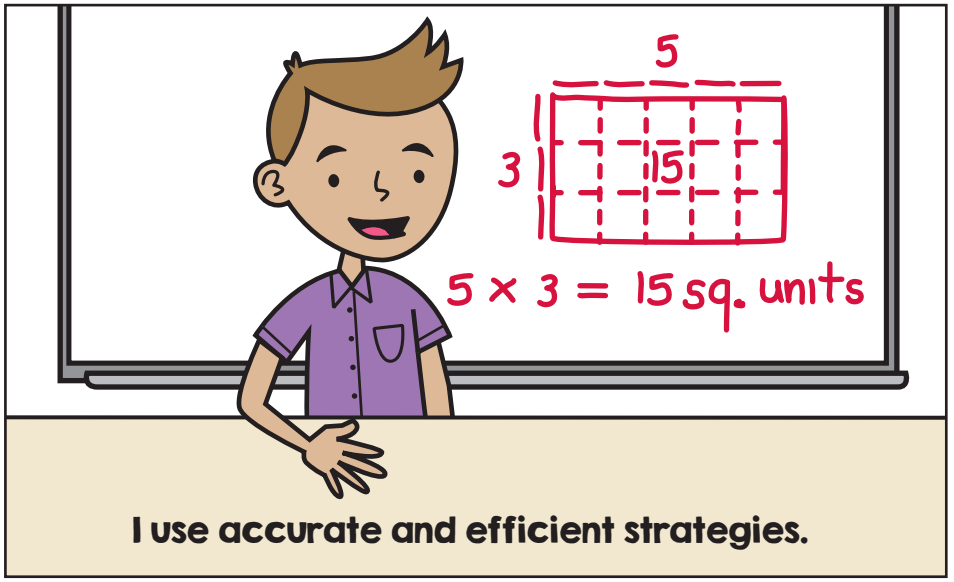

I use math symbols to compare and describe.



I make labeled sketches to show my thinking.




I include units when appropriate.




I use accurate and efficient strategies.

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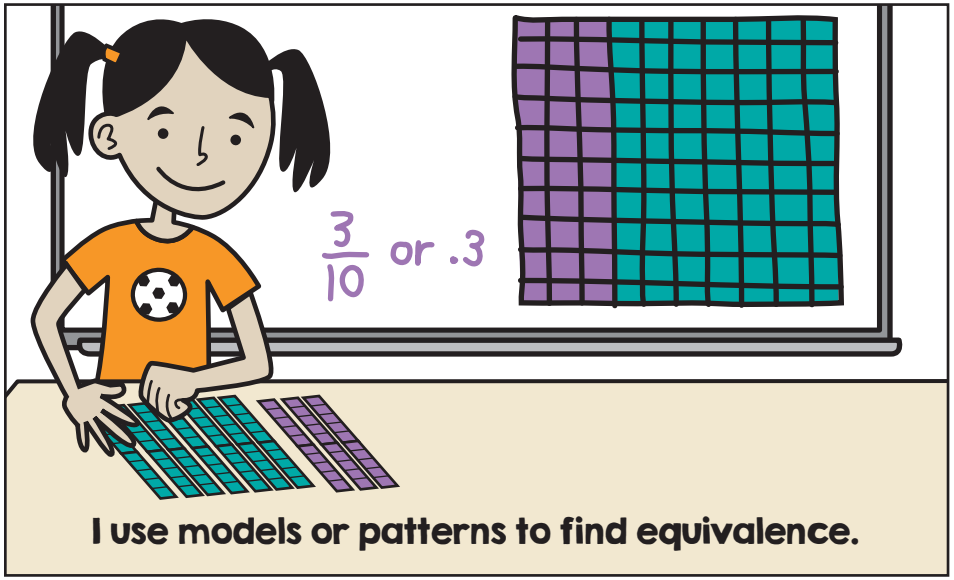
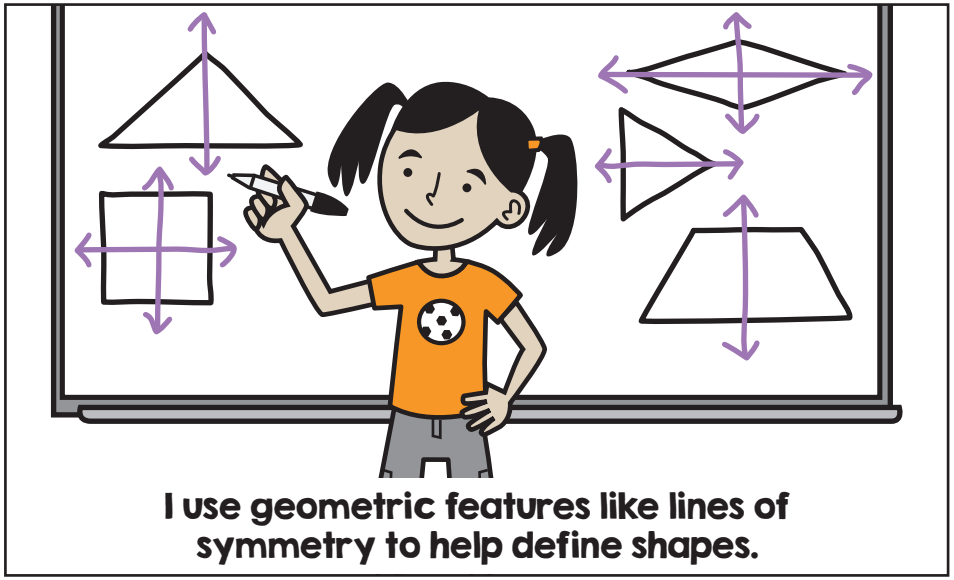
# Look for and make use of structure.

**MP. 7**

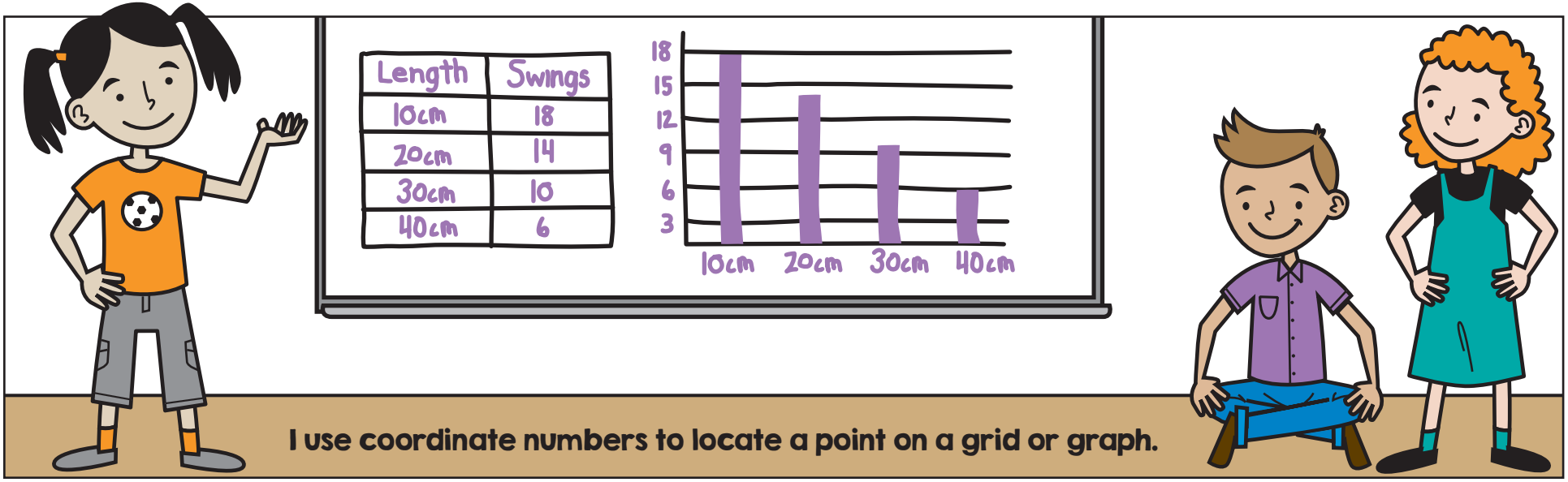
**I use the structure of a number, shape, or model to solve problems and show my thinking.**




**I use models or patterns to find equivalence.**



**I use geometric features like lines of symmetry to help define shapes.**




**I use coordinate numbers to locate a point on a grid or graph.**

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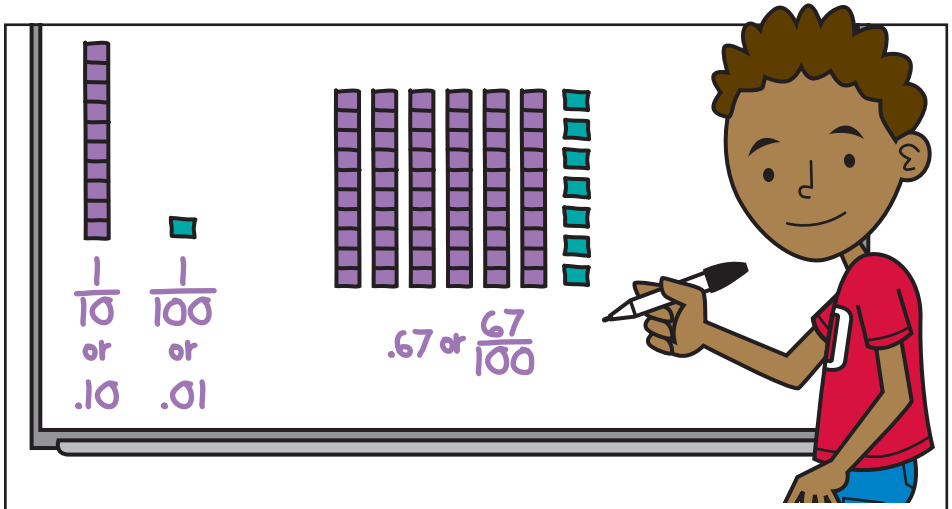
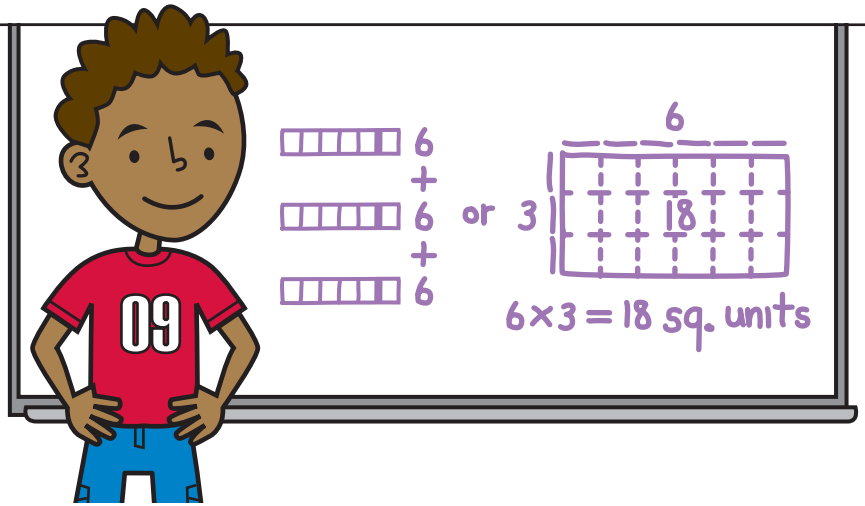
# Look for and express regularity in repeated reasoning.

MP. 8

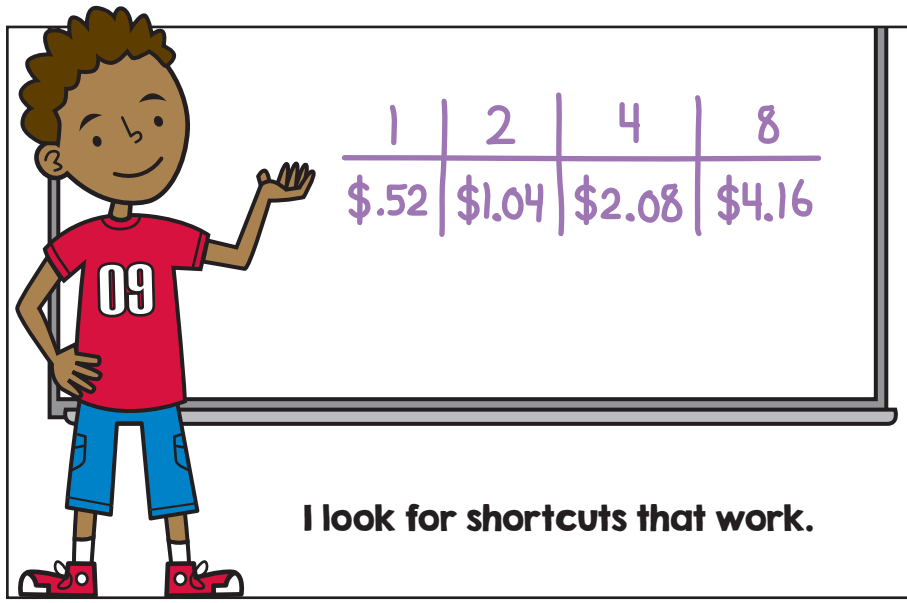
I can make generalizations about numbers and facts, and come up with strategies to solve similar problems.



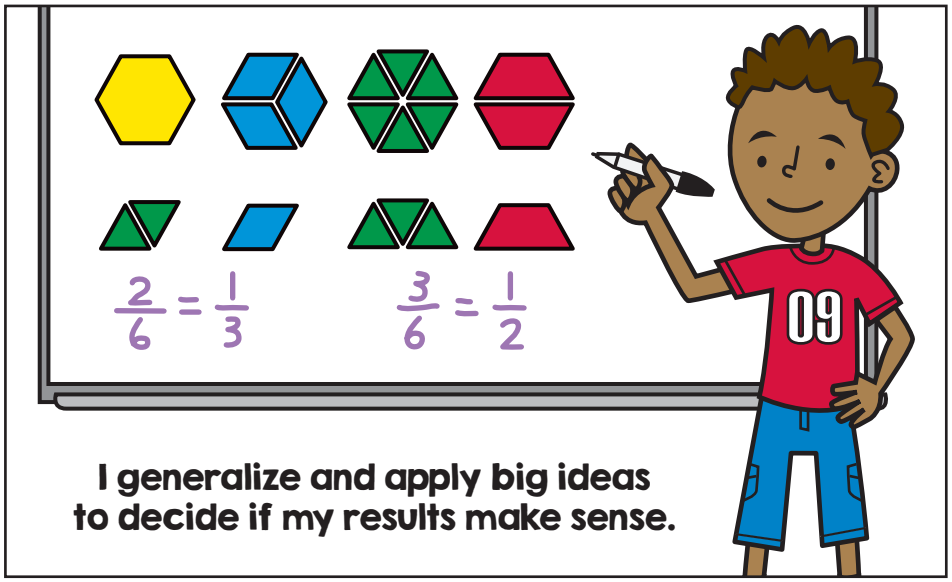

I break large numbers, fractions, and decimals into parts to make calculations easier.




I use strategies to make problems simpler instead of doing the same work over and over.




I look for shortcuts that work.




I generalize and apply big ideas to decide if my results make sense.

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