

# Make sense of problems and persevere in solving them.

Mathematical Practice 1



*When given a problem, I can make a plan, carry out my plan, and check my answer.*

## BEFORE...

**Think** about the problem.

**Ask myself**, "Which strategy will I use?"

Make a **plan** to solve the problem.



## DURING...

**Stick to it!**

**Ask myself**, "Does this make sense?"

**Change** my plan if it isn't working out.



## AFTER...

**CHECK** my work.



**Ask myself**, "Is there another way to solve the problem?"

# Reason abstractly and quantitatively.

Mathematical Practice 2



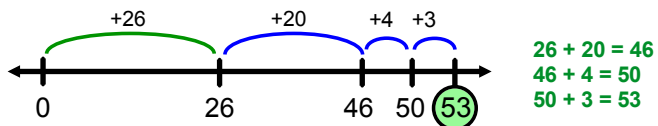
*I can use numbers and words to help me make sense of problems.*

## Numbers to Words

$$26 + 27 = 53$$

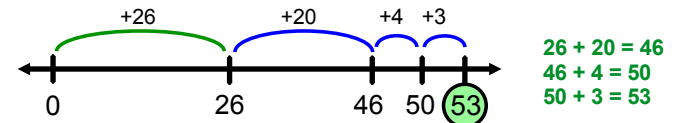


There are 26 boys and 27 girls on the playground.  
How many children are on the playground?



## Words to Numbers

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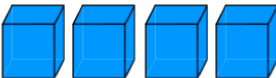
# Construct viable arguments and critique the reasoning of others.

Mathematical Practice 3





*I can explain my thinking and respond to the mathematical thinking of others.*

I can **explain my strategy** using...

- objects, drawings, and actions 
- examples and non-examples
- contexts

I can **compare strategies** with others by...

- listening 
- asking useful questions 
- understanding mathematical connections between strategies

# Model with mathematics.

Mathematical Practice 4



*I can recognize math in everyday life and use math I know to solve problems.*

*I can use....*

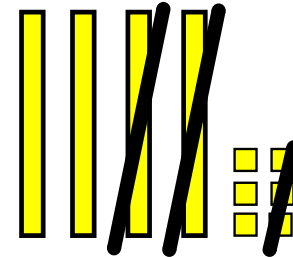
I can use take-away to find the difference between the number of crayons Jill and Rob have.

$$\begin{array}{r} 46 \\ - 23 \\ \hline 23 \end{array}$$

(Symbols)

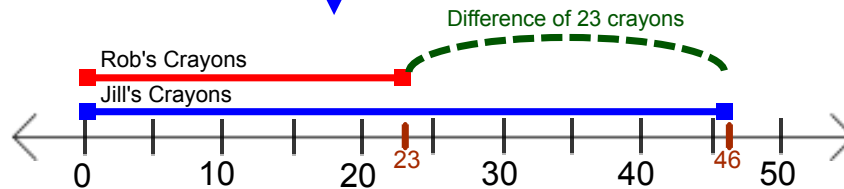
Rob has 23 crayons. Jill has 46 crayons. How many more crayons does Jill have than Rob?

(Objects)



(Words)

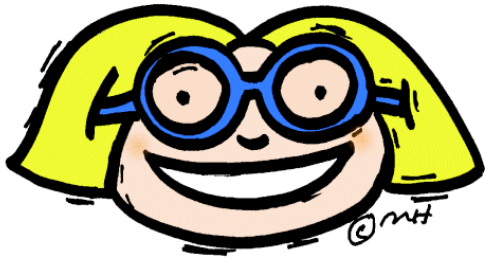
(Pictures)



*...to solve everyday problems.*

# Use appropriate tools strategically.

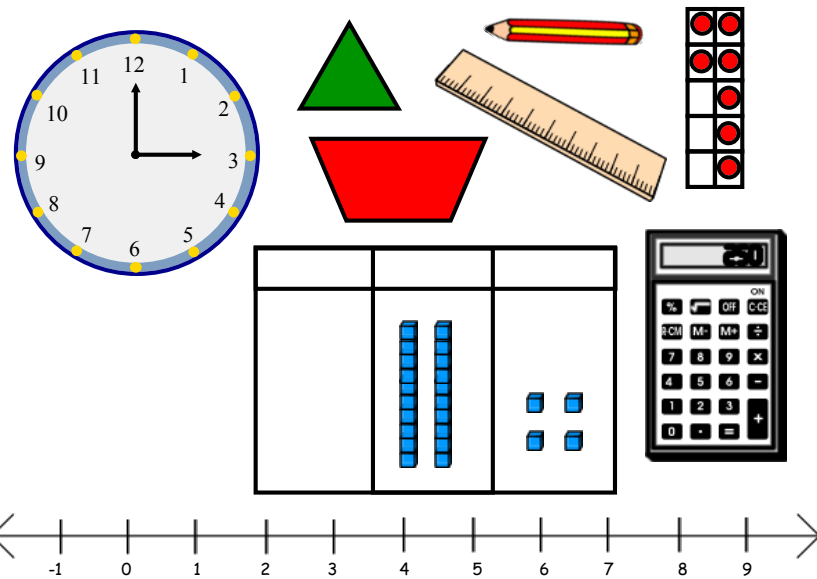
Mathematical Practice 5



*I can use certain tools to help me explore and deepen my math understanding.*



I have a math toolbox.



- I know **HOW** and **WHEN** to use math tools.
- I can reason: “Did the tool I used give me an answer that makes sense?”

# Attend to precision.

Mathematical practice 6



*I can be precise when solving problems and clear when I share my ideas.*

Careful and clear mathematicians use...

symbols

PLUS: join      EQUAL: the same as

$$23¢ + 52¢ = 75¢$$

units of measure:  
CENTS

- math vocabulary
- symbols that have meaning
- context labels
- units of measure
- calculations that are accurate and efficient

# Look for and make use of structure.

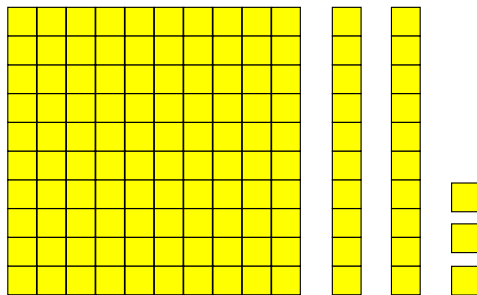
Mathematical Practice 7



*I can see and understand how numbers and shapes are organized and put together as parts and wholes.*

## Numbers

For example:



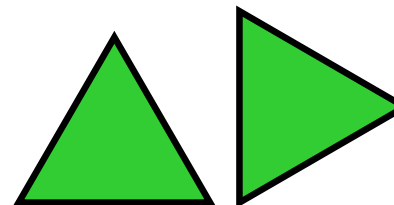
123

1 hundred, 2 tens, and 3 ones

**Base Ten System**

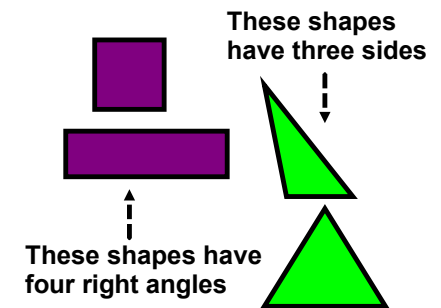
## Shapes

For example:



These are the same!

**Orientation**



**Attributes**

# Look for and express regularity in repeated reasoning.

Mathematical Practice 8

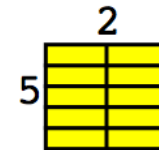


*I can notice when calculations are repeated.*

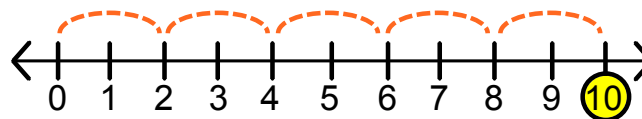
$$5 \times 2 = 10$$

$$2 + 2 + 2 + 2 + 2 = 10$$

I am adding 2 five times.



I am counting rows with 2 in each row five times.



I am making 5 hops of 2 on the number line.