Eight Habits to Develop **CRITICAL** Thinkers and **CONFIDENT** Problem-Solvers

Grounding: "Like Me"

Why? **What?** **How?**

- Listen for a statement that is true for you.
- If you agree with the statement, stand up.
  - Look around and make eye contact with the other parents who are standing.
  - Sit down.

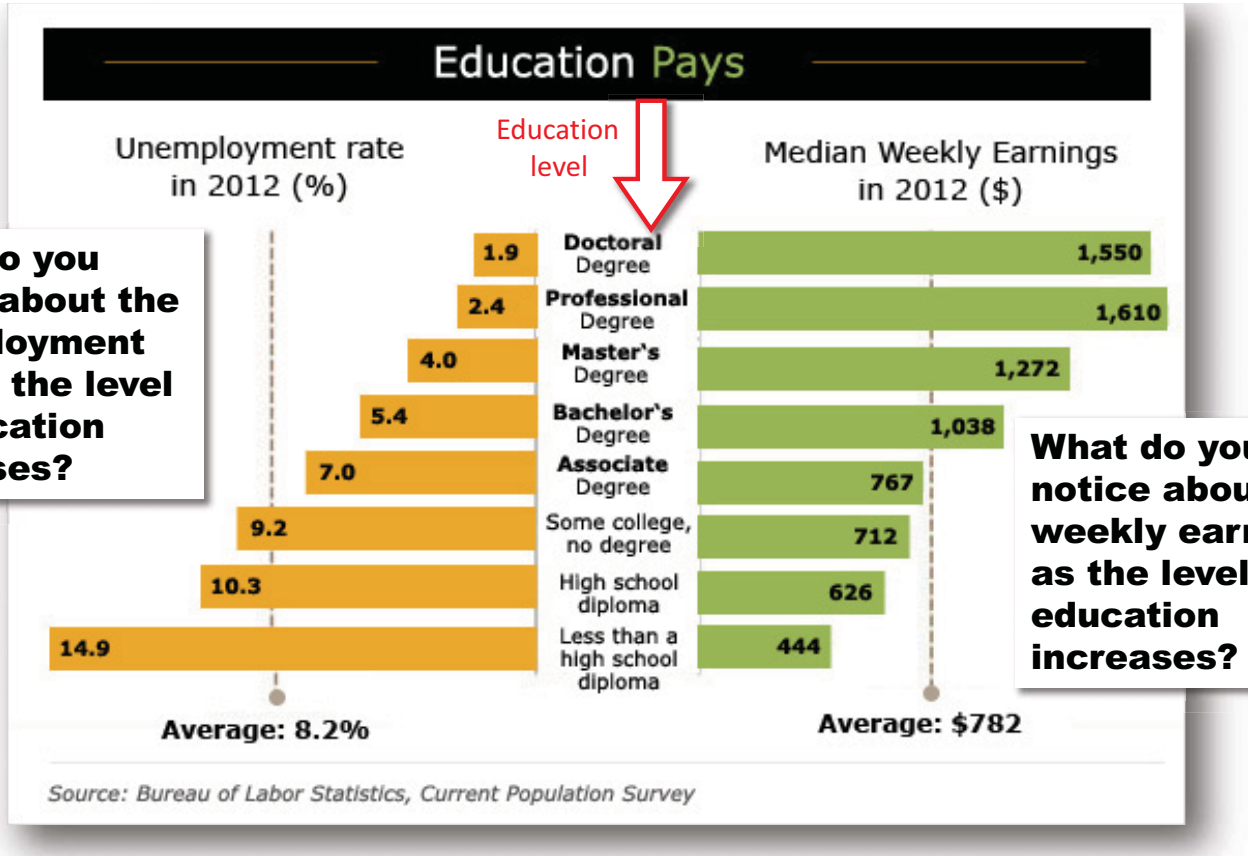
Objectives

1. Understand how the Common Core Standards prepare students for college and career options
2. Learn how you can promote positive attitudes about math and help your children think like mathematicians
3. Take back resources and information to use at home to support math learning

Understand how the Common Core Standards prepare students for college and career options.

OBJECTIVE 1

The Importance of a College Education



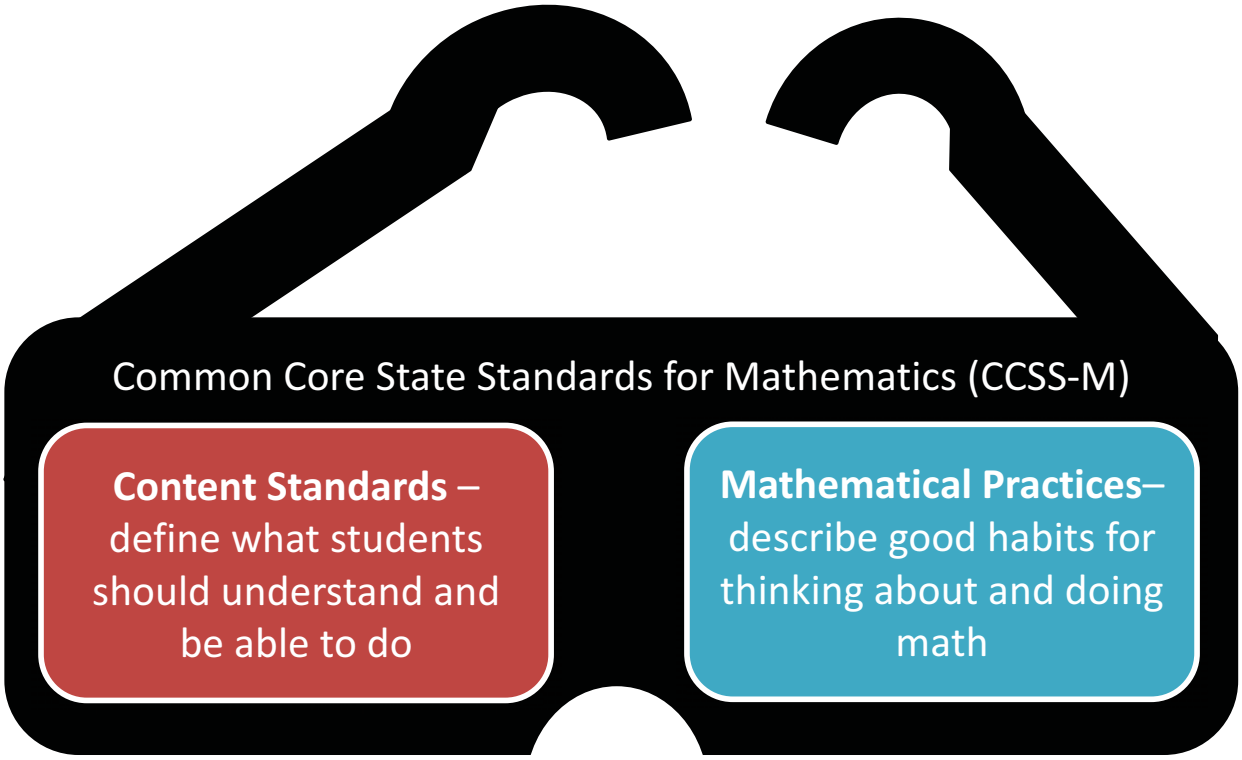
What do you notice about the unemployment rate as the level of education increases?

What do you notice about weekly earnings as the level of education increases?

Common Core State Standards (CCSS) What are they?

- The CCSS are the expectations of **what students should know** by the end of each grade level.
- The CCSS ask students to **demonstrate skills** *and* **communicate their thinking.**
- The CCSS are relevant, so learning is **linked to the real world** and often across multiple disciplines.

http://www.cde.ca.goc/re/cc/ccssinfoflyers.asp



Content Standards + Math Practices = CCSS Math

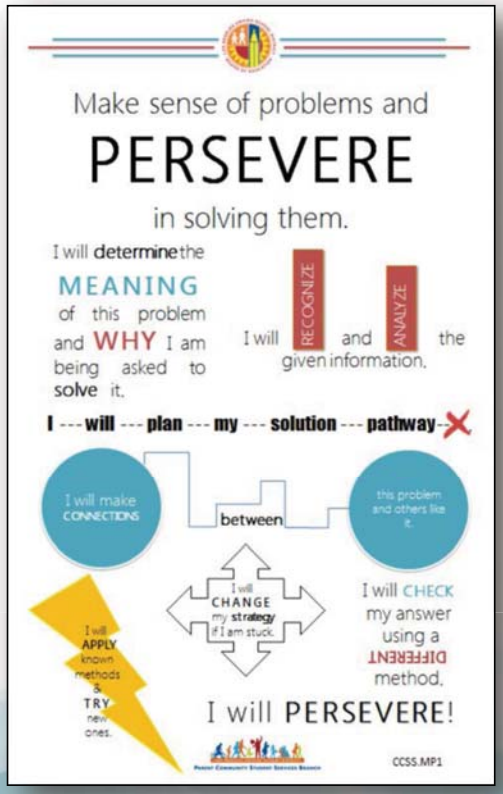
Learn how you can promote positive attitudes about math and help your children think like mathematicians

OBJECTIVE 2

8 Math Practices Gallery Walk

Math Practice 1

*Mathematically proficient students seek to **FULLY UNDERSTAND** what they're being asked to do and aren't afraid to **TRY AGAIN** if they don't succeed the first time.*



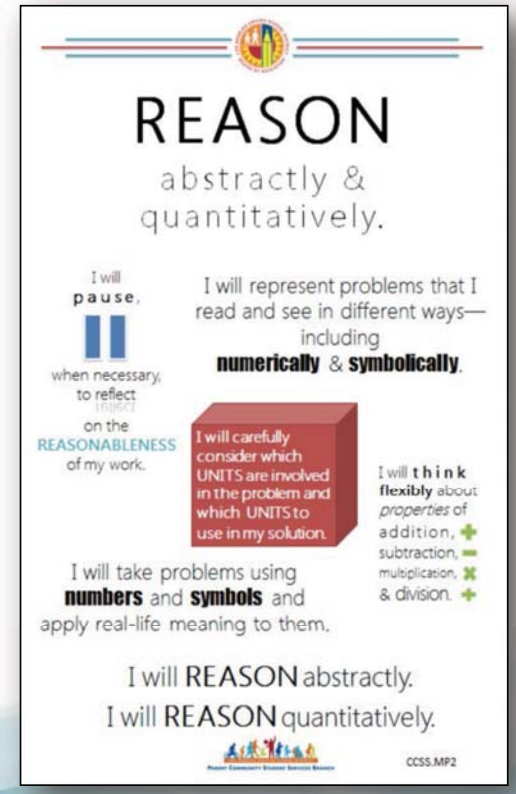
What are some personal ways you can apply this practice?

Math Practice 2

*Mathematically proficient students **MAKE SENSE** of numbers and amounts. They think about how the numbers in the problem **RELATE** to one another.*

$12 - 2 - 3 = 7$

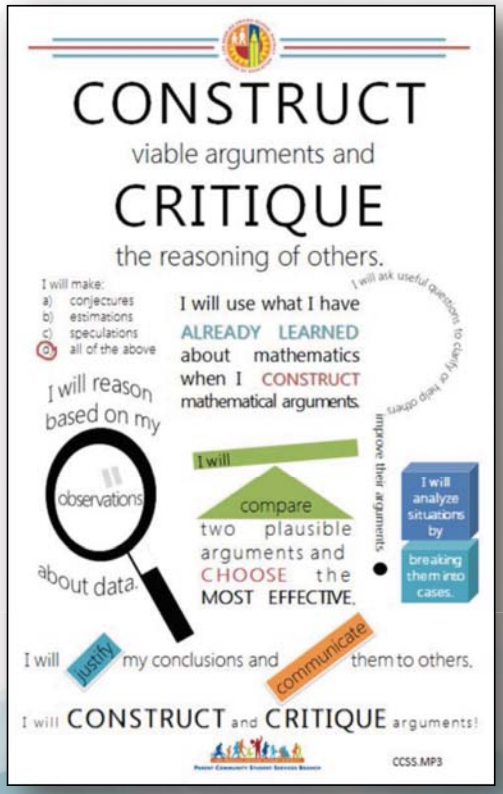
$2x - 2 - 3 = 7$



Can you develop a story to go with this equation?

Math Practice 3

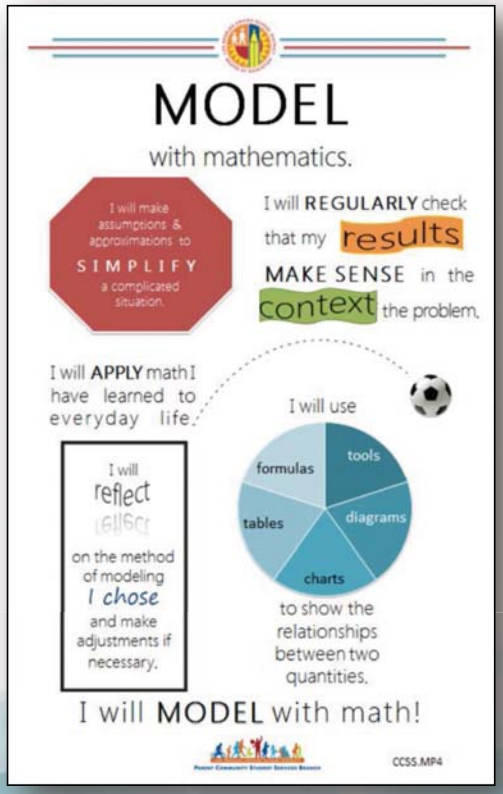
Mathematically proficient students can ***FORM ARGUMENTS*** *that make sense. They can also* ***COMPARE*** *the logic of two competing arguments and identify the one that is correct.*



Which of these statements do you think is most useful in real life?

Math Practice 4

Mathematically proficient students can ***VISUALLY REPRESENT*** *situations to help them solve problems arising in everyday life, society, and the workplace.*



In which other school subject(s) might students be asked to create or visually represent information?

Math Practice Problem

Ana can rent a “New Release” DVD for $2.50 each and a “Movie Classic” DVD for $1.00 each (including tax).

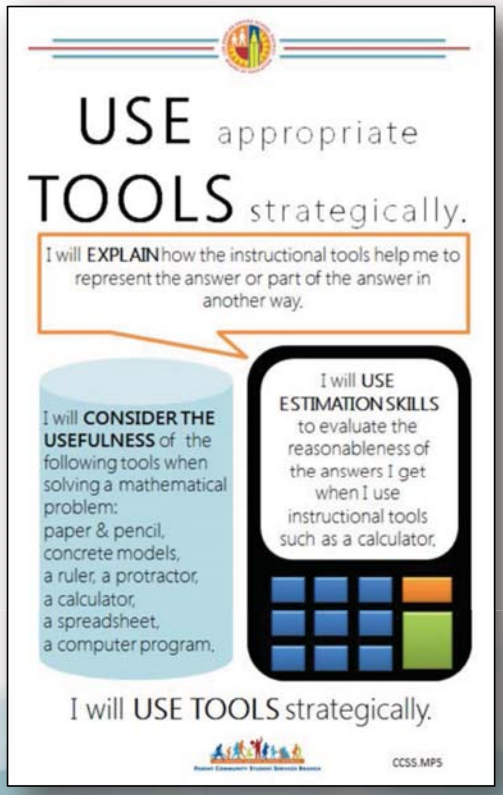
On Saturday evening, Ana rented 5 DVDs and spent a total of $8.00.

- How many of the 5 rentals were “New Releases” and how many were “Movie Classics”?*

*Adapted from 2011 NAEP Sample Mathematics Problem - Grade 8

Math Practice 5

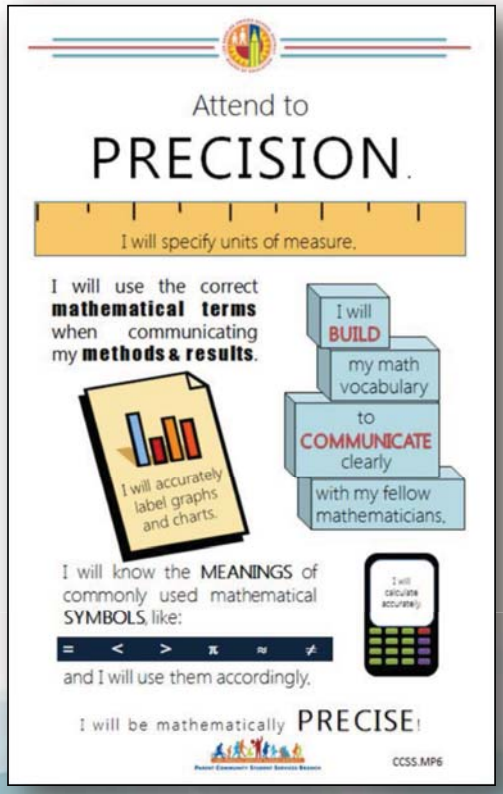
*Mathematically proficient students consider the available **TOOLS** when solving a mathematical problem.*



What are the tools of mathematics? When is it appropriate to use them?

Math Practice 6

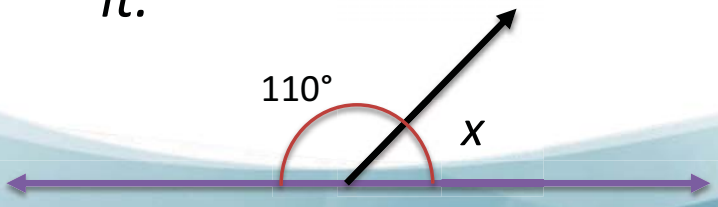
Mathematically proficient students ***COMMUNICATE PRECISELY****, using clear definitions and specific units of measure. They calculate accurately and efficiently.*

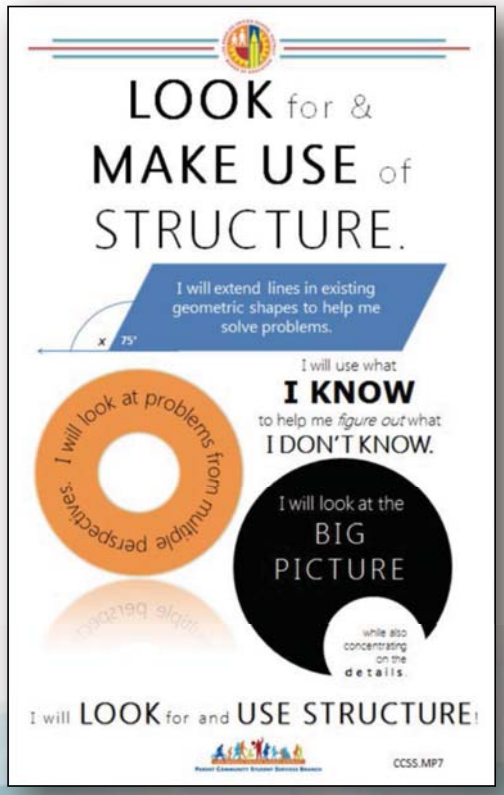


Why is precision a good life-skill?

Math Practice 7

Mathematically proficient students can view problems from multiple perspectives, ***SEEING STRUCTURE*** *and* ***MAKING PREDICTIONS*** *beyond it.*

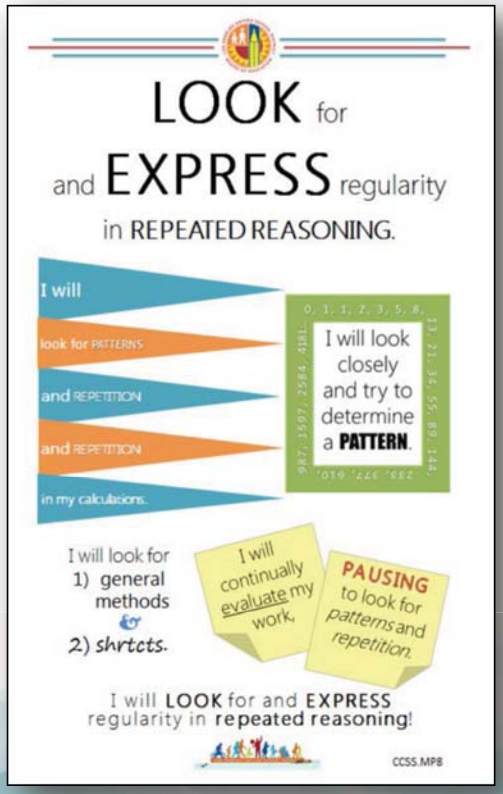




How do students develop their prediction skills?

Math Practice 8

*Mathematically proficient students notice if calculations are **REPEATED**, and look both for **GENERAL METHODS** and for **SHORTCUTS**.*



Example: $\frac{1}{9} = 0.11111111 \ldots or\ .\overline{1}$

"Ninths shortcut"

$\frac{2}{9} = 0.22222222 \ldots or\ .\overline{2}$

What is a benefit of learning a shortcut?

Math Practices in Action

SEAL'S SLEEP

A seal has to breathe even if it is asleep in the water. Martin observed a seal for one hour. At the start of his observation, the seal was at the surface and took a breath. It then dove to the bottom of the sea and started to sleep. From the bottom it slowly floated to the surface in 8 minutes and took a breath again. In 3 minutes it was back at the bottom of the sea again. Martin noticed that this whole process was a very regular one.

After **one hour** the seal was

a) At the bottom of the ocean floor
b) On its way up to the surface
c) Breathing
d) On its way down to the ocean floor

Source: Adapted from sample PISA Mathematics test question, OCED

Take back resources and information to use at home

OBJECTIVE 3

Common Core State Standards Resources for Parents
Recursos para los Padres de los **Normas Académicas Estatales Básicas y Comunes**

Printable Guides to the Standards:

* http://www.cgcs.org/Domain/36 - Council of Great City Schools Parent Roadmaps (English)
* http://www.cgcs.org/Page/244 - Council of Great City Schools Parent Roadmaps (**Spanish**)

http://www.cde.ca.gov/re/cc/ccssinfoflyers.asp - Common Core flyers from California Department of Education (English)

* http://www.pta.org/4446.htm - Parents' Guide to Student Success (English; Click on the two-page or Four-page booklet links to print in **Spanish**)
* http://commoncore-espanol.com/common-core-state-standards-spanish - Common Core State Math Standards in English and Spanish, side-by side (English and **Spanish**)
* http://ocsesa.org/special-projects/common-core-standards-communication-tools/ - Click on Parent Handbook, available in many languages. (**Spanish and other languages**)

Web-based resources:

www.learnzillion.com – Create an account and access Common Core lessons online. (English)

* www.khanacademy.com – Watch lessons on a variety of topics, including those aligned to the Common Core (**Spanish and other languages**)
* http://www.smarterbalanced.org/parents-students/ - Information about the Smarter Balanced Assessments (English)
* http://www.smarterbalanced.org/parents-students/como-ayudar-a-todos-los-estudiantes-a-que-tengan-exito/ - Información sobre los exámenes de Smarter Balanced (**Spanish only**)

http://www.corestandards.org/what-parents-should-know/ - From the official website of the Common Core, a guide to the entire website

http://youcubed.stanford.edu/ - Videos, articles, and games from the Stanford University Graduate School of Education on mathematics learning and promoting a Growth Mindset (English only, Spanish coming soon)

http://www.shmoop.com/common-core-standards/math.html - Standards with examples and related tools (English only, with advertisements)

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Thank you!

LOS ANGELES UNIFIED SCHOOL DISTRICT

PARENT AND COMMUNITY SERVICES