



WHAT IS THE PURPOSE OF SCHOOL?

analyze | factor | function | interpret | structure

USE THE FOCUS WORDS *and alternate parts of speech

analyze (*verb*) to examine; to study

➡ **Sample Sentence:** Some think schools should teach students to **analyze** critically what they see, hear, and read.

🗣️ **Turn and Talk:** How is **analyzing** a short story different from just reading it?

factor (*noun*) something that influences the result of something else

➡ **Sample Sentence:** People have different ideas about the most important **factors** in providing a good education.

🗣️ **Turn and Talk:** What are some **factors** that allow a team to win?

***factor (in/into)** (*verb*) to include in a decision

➡ **Sample Sentence:** Brittany **factored** the weather into her beach day plans.

🗣️ **Turn and Talk:** What do you **factor** into your decision to buy new clothes? I **factor** _____ (price, style, need) into my decision to buy new clothes.

Math has its very own use of **factor**! For example, when you **factor** the number 10, you get the **factors** 1, 10, 2, and 5.

function (*noun*) purpose; role; use

➡ **Sample Sentence:** Each of the three branches of government has a different **function**.

🗣️ **Turn and Talk:** What is the **function** of homework?

***function** (*verb*) to work or operate

➡ **Sample Sentence:** Edwin observed that his camera did not **function** properly in very cold weather.

🗣️ **Turn and Talk:** Does your brain **function** best in the morning, afternoon, or night? How do you know?

interpret (*verb*) to understand or explain something's meaning

➡ **Sample Sentence:** Others **interpret** the main role of school as one of preparing students to join the workforce.

🗣️ **Turn and Talk:** When a person is quiet or silent, how might you **interpret** this behavior?

structure (*noun*) the way that parts of something relate to each other and work together

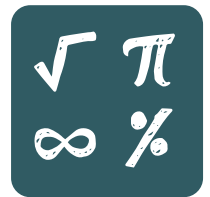
➡ **Sample Sentence:** They believe that this will help students understand the **structure** of our democratic government.

🗣️ **Turn and Talk:** How does the **structure** of a cheetah's body help it to run fast?

***structure** (*verb*) to build or organize

➡ **Sample Sentence:** Aftab **structured** his presentation so that there would be time for questions at the end.

🗣️ **Turn and Talk:** When there is no school, how do you **structure** your day so that you don't get bored?



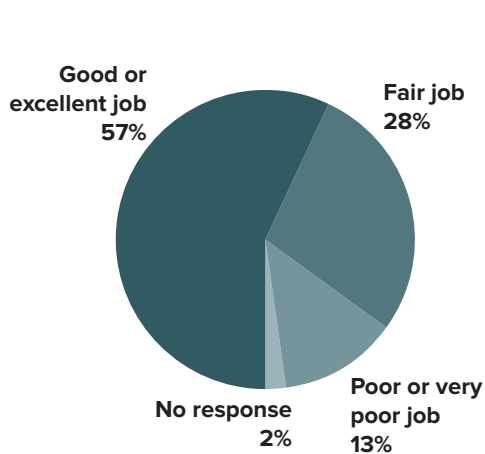
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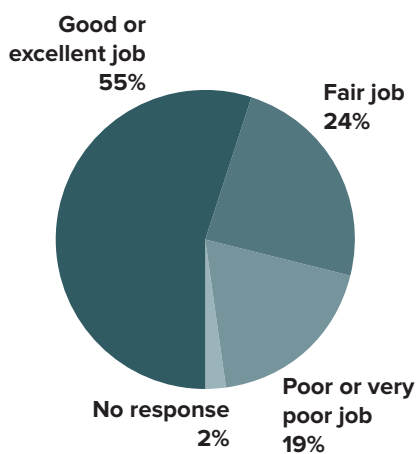
DO THE MATH

How do Americans view their public schools? **Analyze** the three graphs below. The information comes from a national survey of American parents taken by The Associated Press-NORC Center for Public Affairs Research.

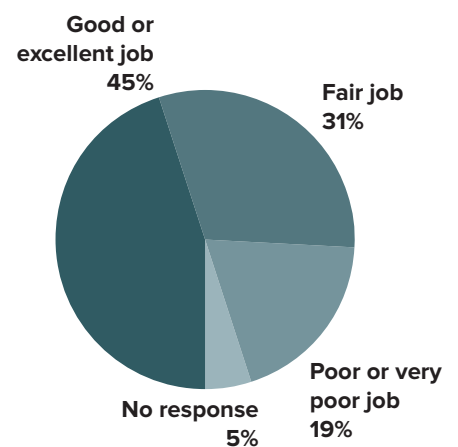
How well do local public schools prepare students for college?



How well do local public schools prepare students to be good citizens?




How well do local public schools prepare students for the workforce?



Option 1: Which of the following is the best way to **interpret** the data shown in these three graphs?

- A. Most American parents think that public schools do a good job of teaching job-related skills.
- B. American parents are concerned that the next generation will not be good citizens.
- C. Most American parents believe that public schools get students ready to go to college.
- D. American parents are disappointed with today's public schools.

Option 2: Based on the graphs, what is the probability that an American parent thinks public schools do a good or excellent job of preparing students for college AND that they do a good or excellent job of preparing students for the workforce?

 **Discussion Question:** Many teachers believe that classrooms **function** more effectively when students are actively involved. In social studies, students might present an analysis of U.S. foreign policy and our relationship to other countries. In Spanish class, students might **interpret** and act out a play written by a Colombian author. In these cases, students prepare and present while the teacher acts as a guide. Is this kind of **structure** realistic for a math class? Or, when you're learning how to multiply or **factor** numbers, is it best for a teacher to give knowledge by explaining the facts?



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THINK SCIENTIFICALLY

The students in Ms. Kahn's class are learning how to **analyze** substances according to their properties.

"One important property of a substance is its density," says Ms. Kahn. "Can anyone tell me what density is?"

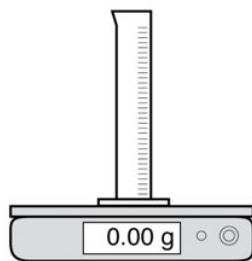
"Isn't it sort of like how massive something is?" says Marian. "I mean, that's not it exactly, but mass is an important **factor** in density... It's hard to explain. Density is sort of how tightly mass is packed into something."

"Yeah," Jamal adds, "density is how much mass a certain volume of something has. Say you have two things that are the same volume, but one has more mass. Then the one that's the same size but more massive is more dense."

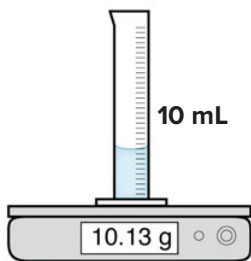
"Right," says Ms. Kahn. "Density is the ratio of mass to volume. We can write it as an equation, like this." Ms. Kahn writes $d = m/v$ on the board and then says, "Density equals mass divided by volume. Scientists often compare the density of different substances to water, because water has a density of exactly one gram per milliliter. But don't take my word for it—see if you can figure out the density of water for yourselves."

Marian and Jamal set out to check the density of water, but each interprets Ms. Kahn's assignment differently.

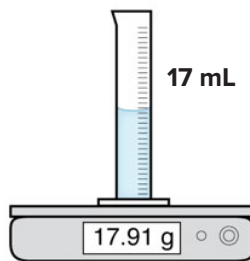
Marian puts a graduated cylinder marked off in milliliters on a scale and resets the scale to zero so that it will not count the mass of the cylinder.



Then Marian pours some water into the cylinder and records the volume and mass of the water.



Next, Marian adds some more water and records the volume and mass again.



Finally, Marian calculates the density of water based on her measurements.

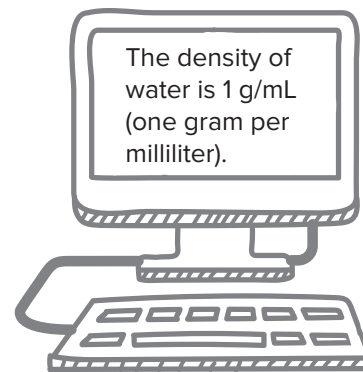
$$10.13 \text{ g}/10 \text{ mL} = 1.013 \text{ g/mL} \quad 17.91 \text{ g}/17 \text{ mL} = 1.054 \text{ g/mL}$$

Take the average of the two measurements:

$$(1.013 + 1.054) \div 2 = 1.034$$

So the density of water is about 1.034 g/mL

Meanwhile, Jamal goes online and finds the following information on three reliable websites:



Which student do you think got the most accurate answer, Marian or Jamal? _____

What might be some reasons for the difference in their answers?

How would you have **interpreted** the purpose of this assignment? How does it relate to the purpose of school?

