Understanding Fractions
Problems from Video

The following four key points are important to understanding fractions.

Key Point 1: You must know the size of the unit or the size of the whole.
Key Point 2: You must have equal-sized parts.
Key Point 3: You must know the number of equal-sized parts in the unit.
Key Point 4: You must know the number of equal-sized parts being considered.

The following problems will help you focus on each of the key ideas. Solve each problem and discuss your reasoning with another person.

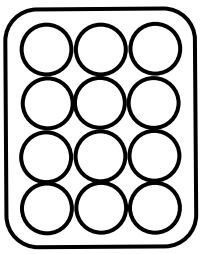
Problems for Key Point 1:
If Ed paints one half of a small wall and Michelle paints one half of a large wall, have they painted the same amount? Explain your answer.

If Paco used one-half can of the red paint and one-half can of blue paint, does it mean he used the same amount of each color? Under what circumstances could the answer be, *"No, he did not use the same amount of each color*."

Problem for Key Point 2:
If Paco emptied one large can of green paint and then emptied two small cans of purple paint, is two thirds of the paint he used purple? Explain your answer.

Problems for Key Point 3:
We could divide a wall into two equal parts to show halves, five equal parts to show fifths, or even 20 equal parts to show twentieths. What happens to the size of each part as you divide a wall into more equal-sized parts? Explain your answer.

Paco bought a case of spray paint containing 12 cans.



How many cans are in one twelfth of the case?

How many cans are in one fourth of the case?

How many cans are in one third of the case?

How many cans are in one sixth of the case?

What happens to the size of each part as you divide the case into more equal-sized parts? Explain your answer.

What part of the fraction tells you the number of equal-sized parts in the unit or one?

Problems for Key Point 4:
If 3 of the 12 cans of paint in the case are yellow, what fraction of the case is yellow? Explain your answer.

If we divided a wall into six equal sections and then painted four of the six sections, what fraction represents how much we painted? Explain your answer.

What part of a fraction tells you the number of equal-sized parts being considered?