

Making Sense of Number Sense

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Introductions:

Come up with 3 interesting facts about yourself that include either a **fraction** or a **decimal**.

1.

2.

3.

What does NUMBER SENSE mean to you?

What is Subitizing?

- Subitizing refers to the ability to 'see' a small amount of objects and know how many objects there are without counting.

For more information on Subitizing:

Clements, D. H. (1999). Subitizing: What is it? Why teach it? Teaching children mathematics, 5, 400-405.

Subitizing Activities

- Domino Flash
- Domino War

Step 1: Deal out all of the dominoes and ask each player to keep their dominoes face down

Step 2: Ask each player to choose one Domino and flip it face up in front of them.

Step 3: Each player must add up the two sides of their Domino to get the total. Whoever has the highest number wins both Dominoes.

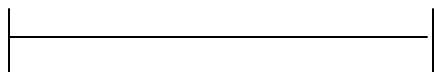
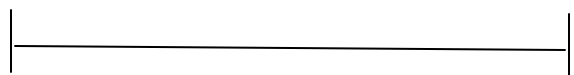
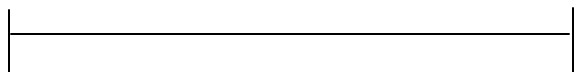
Step 4: If both players have the same total number, for example, if Player 1 flips over a $\frac{3}{4}$ Domino and Player 2 flips over a $\frac{5}{2}$ Domino (both equal to 7), this is called "War." When "War" occurs, both players must choose a second Domino, flip it face up, add up the total number, and whoever has the higher number wins all four Dominoes.

Step 5: When one player loses all their dominoes, they are out of the game. Whoever holds all the dominoes at the end of the game is the winner.

- Domino Concentration

⇒ **Why might subitizing be important for students in math?**

Zoom: Guess my Number (YOUR TRY)



QUESTION: How did including the zooming number line improve number sense?

Why do kids struggle with FRACTIONS?

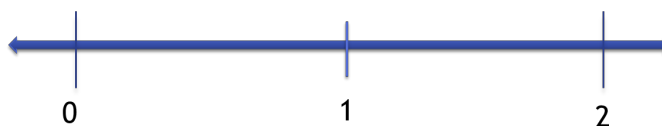
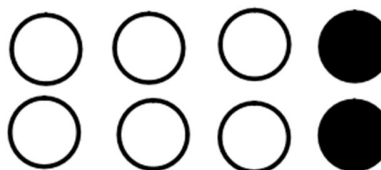
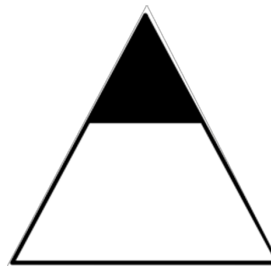
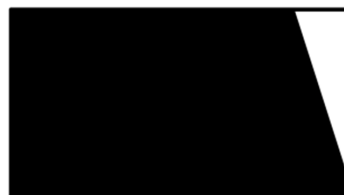
- We often teach fractions as an isolated unit.
- We rush into computation and procedure.
- We make assumptions.
- We fail to make connections.

FRACTION Connection:

- Measuring
- Cooking
- Telling time
- Decimals
- Ratios
- Map Skills
- Driving

Take a moment to create as many addition and/or subtraction sentences that equal $\frac{5}{8}$ using only eighths.

How much is shaded in?



Comparing Fractions:

- More same size parts (same denominator)
- Same number of parts, but different size parts (same numerator)
- More or less than half
- Looking at the Negative Space

Notes on Finding Half:

Who has more?

$$\frac{5}{8} \quad \frac{7}{15}$$

$$\frac{5}{10} \quad \frac{4}{9}$$

$$\frac{6}{9} \quad \frac{4}{10}$$

Hint: Think about using half as a benchmark.

Notes on Negative Space:

Who has more?

$$\frac{7}{8} \quad \frac{11}{12}$$

Hint: Think about the negative space.

Estimate:

- Is it more or less than $\frac{1}{2}$?
- Is it more than one whole?
- About how large will the sum or difference be?
- How do you know?

1.

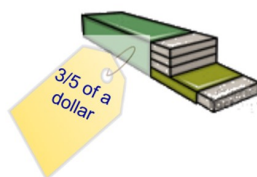
2.

3.

4.

5.

How Much does it really cost?



Relating decimals to Money:

Penny: .01 or 1/100 of dollar

Dime: .1 or . 10 1/10 of dollar

FINAL THOUGHTS:

- Rome was not conquered in a day; take small steps.
- Incorporate number sense activity throughout each unit or during odd free moments .
- Spiral back to activities throughout the school year.