

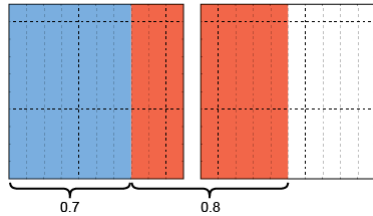
Activity 40 Assessment

Operations with Fractions and Decimals Consolidation

Conceptual Meaning of Addition and Subtraction of Decimals

Recognizes addition and subtraction situations and models concretely to add or subtract to tenths

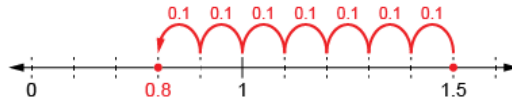
$$0.7 + 0.8 = 1.5$$



"7 tenths + 8 more tenths = 1 whole and 5 tenths"

Models and symbolizes ways to solve problems by using a number line

$$1.5 - 0.7 = ?$$



Uses an understanding of place value to add or subtract decimals with tenths (decomposes both numbers)

$$14.6 + 27.8 = ?$$

$$14 + 27 = 41 \text{ (whole numbers)}$$

$$0.6 + 0.8 = 1.4 \text{ (decimals)}$$

$$41 + 1.4 = 42.4$$

"I decomposed both numbers, added the whole numbers, then the tenths."

Observations/Documentation

Activity 40 Assessment

Operations with Fractions and Decimals Consolidation

Conceptual Meaning of Addition and Subtraction of Decimals (con't)

Uses an understanding of place value to decompose one number

$$\begin{aligned} 14.6 + 27.8 &= ? \\ 27.8 &= 27 + 0.8 \\ 14.6 + 27 &= 41.6 \\ 41.6 + 0.8 &= 42.4 \end{aligned}$$

"I used place value to add on the second number."

Uses estimation and mental math strategies to check reasonableness of solutions

$$\begin{aligned} 25.86 - 17.23 &= 8.63 \\ 26 - 17 &= 9 \end{aligned}$$

"8.63 is the answer I calculated, and it is close to 9, so my answer is reasonable."

Solves addition and subtraction problems flexibly, using a variety of strategies

$$\begin{aligned} 25.85 - 17.21 &= ? \\ 25.85 + 0.15 &= 26 \\ 17.21 + 0.15 &= 17.36 \\ 26 - 17.36 &= 8.64 \end{aligned}$$

$$\begin{array}{r} 11 \\ 25.85 \\ - 17.21 \\ \hline 8.64 \end{array}$$

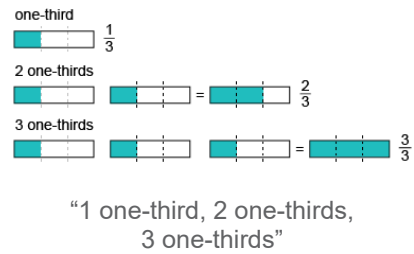
Observations/Documentation

Activity 40 Assessment

Operations with Fractions and Decimals Consolidation

Relationship Between Repeated Addition of Unit Fractions and Multiplication

Counts unit fractions



Concretely solves problems involving the repeated addition of unit fractions

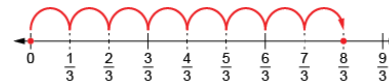
Miranda feeds her puppy, Atlas, $\frac{1}{3}$ cup of food, 4 times per day.
How much food does the puppy get in two days?



“1 one-third, 2 one-thirds, 3 one-thirds, 4 one-thirds, 5 one-thirds, 6 one-thirds, 7 one-thirds, 8 one-thirds”

$$\frac{8}{3} \text{ cups} = 2\frac{2}{3} \text{ cups}$$

Models symbolically and describes repeated addition of unit fractions



$$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{8}{3}$$

$$\frac{8}{3} = \frac{6}{3} + \frac{2}{3} = 2\frac{2}{3}$$

“Atlas gets $2\frac{2}{3}$ cups of food per day.”

Uses multiplication of unit fractions to flexibly solve related problems

Atlas is fed 4 times per day for 2 days: $4 \times 2 = 8$

$$8 \times \frac{1}{3} = \frac{8}{3}, \text{ or } 2\frac{2}{3}$$

“Atlas gets $2\frac{2}{3}$ cups of food.”

Observations/Documentation