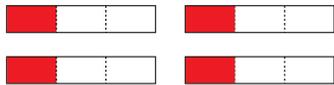


Activity 11 Assessment

Unit Rates

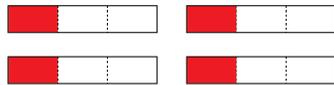
Relating Fractions, Decimals, Percents, Ratios, and Rates

Describes an equal-sharing situation using a fraction.



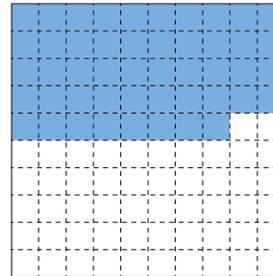
“To share 4 granola bars among 3 friends, I draw a picture that shows 4 wholes each divided into thirds.”

Describes a fraction as a division statement and vice versa.



“To share 4 granola bars among 3 friends, I can write the division statement $4 \div 3$ or I can write a fraction $\frac{4}{3}$. The picture shows 4 wholes each divided into thirds. Each person gets 3 thirds and one more third or $1\frac{1}{3}$.”

Makes connections between fractions, decimals, and percents.



“I see forty-eight hundredths, which is the same as 0.48 or $\frac{48}{100}$. Since percent is ‘out of 100’, it can also be thought of as 48% of something.”

Determines the percent of a number.

“I can determine 12% of 40 by multiplying 40 by 12 and dividing by 100.”

$$40 \times 12 \div 100 = 480 \div 100 = 4.8$$

Observations/Documentation

Activity 11 Assessment

Unit Rates

Relating Fractions, Decimals, Percents, Ratios, and Rates (cont'd)

Relates percent of a number to ratios and proportions.

"In the expression 12% of 50,
12% represents $\frac{12}{100}$.

I can use equivalent ratios to determine what 12% is of 50.

$$\frac{12}{100} = \frac{6}{50}$$

I divide the denominator by 2 to get 50. So, I divide the numerator by 2 to get 6."

Represents and records ratios and rates symbolically (using ratio table).

10 glue sticks cost \$4.
How much will 60 glue sticks cost?

For example, using rates:

Glue Sticks	10	20	30	40	50	60
Cost (\$)	4	8	12	16	20	24

"I skip-counted by 10s and 4s."

Represents and creates equivalent ratios and rates.

10 glue sticks cost \$4.
How much will 60 glue sticks cost?

For example, using ratios:

"The ratio of glue sticks to cost is 10:4. To find the cost of 60 glue sticks, I multiply each term by 6."

$$10 \times 6 : 4 \times 6$$

$$60 : 24$$

Flexibly solves problems involving fractions, decimals, percents, ratios, and rates.

The ratio of dogs to cats in the animal shelter is 8:12. Show the comparison using percents.

"The whole is $8 + 12 = 20$.
Since percent is "out of 100", I multiply each term in the ratio by 5 because $5 \times 20 = 100$.
 $8 \times 5 : 12 \times 5$, or 40:60
40% of the animals are dogs and 60% are cats."

Observations/Documentation