## Learning Targets

### Percentage Increase and Decrease

### Lesson 1: Half as Much Again

* I can use the distributive property to rewrite an expression like $x+\frac{1}{2}x$ as $(1+\frac{1}{2})x$.
* I understand that “half as much again” and “multiply by $\frac{3}{2}$” mean the same thing.

### Lesson 2: Say It with Decimals

* I can use the distributive property to rewrite an equation like $x+0.5x=1.5x$.
* I can write fractions as decimals.
* I understand that “half as much again” and “multiply by 1.5” mean the same thing.

### Lesson 3: Increasing and Decreasing

* I can draw a tape diagram that represents a percent increase or decrease.
* When I know a starting amount and the percent increase or decrease, I can find the new amount.

### Lesson 4: One Hundred Percent

* I can use a double number line diagram to help me solve percent increase and decrease problems.
* I understand that if I know how much a quantity has grown, then the original amount represents 100%.
* When I know the new amount and the percentage of increase or decrease, I can find the original amount.

### Lesson 5: Percent Increase and Decrease with Equations

* I can solve percent increase and decrease problems by writing an equation to represent the situation and solving it.

### Lesson 6: More and Less than 1%

* I can find percentages of quantities like 12.5% and 0.4%.
* I understand that to find 0.1% of an amount I have to multiply by 0.001.

### Lesson 7: Tax and Tip

* I understand and can solve problems about sales tax and tip.

### Lesson 8: Percentage Situations

* I can find the percentage increase or decrease when I know the original amount and the new amount.
* I understand and can solve problems about commission, interest, markups, and discounts.

### Lesson 9: Measurement Error

* I can represent measurement error as a percentage of the correct measurement.
* I understand that all measurements include some error.

### Lesson 10: Percent Error

* I can solve problems that involve percent error.

### Lesson 11: Error Intervals

* I can find a range of possible values for a quantity if I know the maximum percent error and the correct value.

### Lesson 12: Posing Percentage Problems

* I can write and solve problems about real-world situations that involve percent increase and decrease.



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