EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

At the beginning of Topic A, students learn about **percents** greater than 100% and less than 1%. Students apply this knowledge to solve a variety of percent problems throughout the topic. As students' confidence with percents grows, they start to use their knowledge to solve problems involving percent of increase and percent of decrease. Throughout the topic, students use models—including the **double number line diagram**, **tape diagram**, and **10 × 10 grid**—to help them visualize their work with percents.

You can expect to see homework that asks your child to do the following:

- Use 10 × 10 grids to create models representing different percents.
- Order values presented as fractions, decimals, and percents.
- Convert between fractions, decimals, and percents.
- Write and solve equations for real-world problems involving percents.
- Calculate percent increases and percent decreases.
- Use visual models to determine 100% of a given quantity.

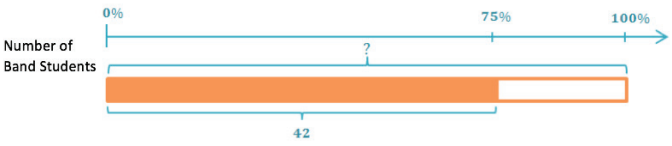
SAMPLE PROBLEMS *(From Lessons 4–5)*

Lu's math score on her achievement test in Grade 7 was 650. Her math teacher said that her score went up by 25% from her score in Grade 6. What was Lu's score in Grade 6?

$$\textit{Quantity} = \textit{Percent} \times \textit{Whole}$$
$$650 = 125\% \times W$$
$$650 = 1.25W$$
$$\frac{1}{1.25}(650) = \frac{1}{1.25}(1.25W)$$
$$\frac{650}{1.25} = W$$
$$\frac{65{,}000}{125} = W$$
$$520 = W$$

Lu's score in Grade 6 was 520.

The 42 students who play wind instruments represent 75% of the students in the band. How many students are in the band?



$$42 \rightarrow 75\%$$
$$\frac{42}{3} \rightarrow 25\%$$
$$\frac{42}{3}(4) \rightarrow 100\%$$
$$14(4) \rightarrow 100\%$$
$$56 \rightarrow 100\%$$

There are 56 students in the band.

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

You can help at home in many ways. Here are some tips to help you get started.

- Give your child a value represented as a fraction, decimal, or percent. Challenge your child to convert the value to the other two forms. For example, you might present your child with the decimal 0.125 and ask for it to be written as a fraction ($\frac{125}{1,000}$ or $\frac{1}{8}$) and as a percent (12.5%).
- With your child, discuss real-world situations that involve a percent increase or decrease and what this means. For example, "I received an 8% pay increase at work. How do I determine my new salary?"

TERMS

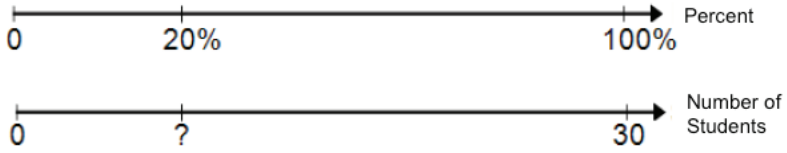
Original price: The starting price in a percent problem. It may refer to the cost or wholesale price (i.e., the price that a seller pays to the manufacturer or supplier).

Percent: One part in every hundred. One out of 100 is written as $\frac{1}{100}$ or 1%. Percentages can be used as rates. For example, at the end of a year, the value of an account with a 2% annual interest rate will increase by $\frac{2}{100}$ times the original value.

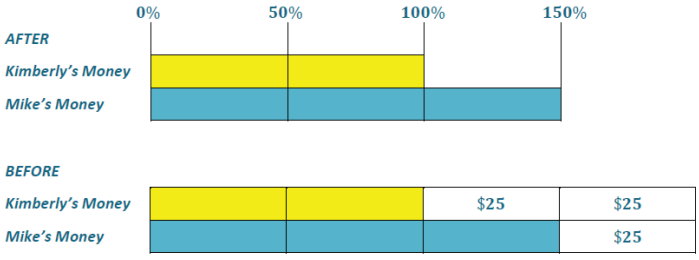
Selling price: The original price plus any markup or minus any markdown; sometimes called the retail price.

MODELS

Double Number Line Diagram



Tape Diagram



10 × 10 Grid