|  |
| --- |
| **Clarity for Learning** |
| **Standard KY.7.RP.3** Use percents to solve mathematical and real-world problems. a. Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, a part, and a percent, given two of these. b. Use proportional relationships to solve multistep ratio and percent problems. |
| **Concepts (Nouns)**percents percent of a quantityrate per 100proportional relationshipsratio | **Skills (Verbs)**usesolvefind |
| **Learning Progressions***Prerequisite Skills:** Express ratios as part-to-part or as part-to-whole*.*
* Calculate equivalent ratios using multiplication and division.
* Understand the concept of percent as a special type of rate in which the first term is compared to 100.
* Use rates and unit rates to solve problems.

*Grade Level Skills:** Use bar diagrams to represent the relationship between the whole and the part and solve percent problems.
* Understand the relationship between fractions, percents, and decimals.
* Write a proportion to model a percent situation.
* Use a percent proportion to find an unknown part, whole or percent.
* Write and use the percent equation to solve problems involving proportional relationships.
* Use bar diagrams and the percent equation (part = percent x whole) to find the percent change (whether it be an increase or decrease).
* Understand and calculate the percent of markup and markdowns.
* Understand what simple interest is and how it is calculated.

*Clarifications:*a. For example, 30% of a quantity means 30/100 times the quantity. b. Could include but not limited to simple interest, tax, markups and markdowns, gratuities and commissions, percent increase and decrease, percent error.KY.6.RP.3c → KY.7.RP.3  |
| **Learning Intentions (I am learning to...)** | **Success Criteria (I know I’m successful when...)** |
| Make connections between equivalent ratios, percents and proportional relationships and use them to solve real-world problems. | * I can understand, find and analyze percents of numbers.
* I can use equivalent ratios to find a percent of a number.
* I can use proportions to solve percent problems.
* I can represent and solve percent problems using the percent equation (part = percent x whole).
* I can solve problems involving percent change (increase or decrease) and percent error using the percent equation.
* I can understand the effect a markup or markdown has on the selling price.
* I can find the percent markup and markdown and apply it to determine the selling price.
* I can apply percent reasoning to solve simple interest problems.
 |