Lesson 29: Solving Percent Problems

Classwork

Exploratory Challenge 1

*Claim: To find* $10\%$ *of a number, all you need to do is move the decimal to the left once.*

Use at least one model to solve each problem (e.g., tape diagram, table, double number line diagram, $10×10 $grid).

* 1. Make a prediction. Do you think the claim is true or false? Explain why.

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| * 1. Determine $10\%$ of $300$.
 | * 1. Find $10\%$ of $80$.
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| * 1. Determine $10\%$ of $64$.
 | * 1. Find $10\%$ of $5$.
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| * 1. $10\%$ of is $48$.
 | * 1. $10\%$ of is $6$.
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* 1. Gary read $34$ pages of a $340$ pages book. What percent did he read?
	2. Micah read $16$ pages of his book. If this is $10\%$ of the book, how many pages are in the book?
	3. Using the solutions to the problems above, what conclusions can you make about the claim?

Exploratory Challenge 2

*Claim: If an item is already on sale and then there is another discount taken off the new price, this is the same as taking the sum of the two discounts off the original price.*

Use at least one model to solve each problem (e.g., tape diagram, table, double number line diagram, $10×10$ grid).

* 1. Make a prediction. Do you think the claim is true or false? Explain.
	2. Sam purchased$ 3$ games for $\$140$ after a discount of $30\%$. What was the original price?
	3. If Sam had used a $20\%$ off coupon and opened a frequent shopper discount membership to save $10\%$, would the games still have a total of $\$140$?
	4. Do you agree with the claim? Explain why or why not. Create a new example to help support your claim.

Lesson Summary

Percent problems have three parts: whole, part, percent.

Percentage problems can be solved using models such as ratio tables, tape diagrams, double number line diagrams, and $10×10$ grids.

Problem Set

1. Henry has $15$ lawns mowed out of a total of $60$ lawns. What percent of the lawns does Henry still have to mow?
2. Marissa got an $85\%$ on her math quiz. She had $34$ questions correct. How many questions were on the quiz?
3. Lucas read $30\%$ of his book containing$ 480$ pages. What page is he going to read next?