

Warm-Up

Finding Friendly Percentages



Lesson Question



Lesson Goals

Use friendly percents to find the percent of a number.

Divide to find the of a number.

Add percents to find the percent of a number.



Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	a rational number written as a fraction in which the numerator is 1 and the denominator is a positive integer
	a graphic representation of data
	an expression that compares two or more numbers
	a ratio that compares a number to 100

Instruction

Finding Friendly Percentages

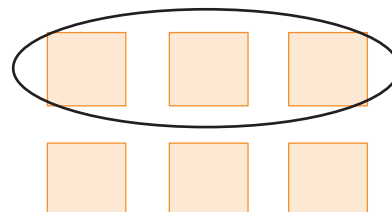
Slide

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Understanding Friendly Percents

Jill ate 50% of the 6 crackers in her lunch. How many crackers did she eat?

- 50% is the **ratio** of 50 to .
 - The fraction $\frac{50}{100}$ can be reduced to the **unit fraction** $\frac{1}{2}$.
- $$\frac{50}{100} = \frac{1}{2}$$



$$50\% \text{ of } 6 = \text{ }$$

$$6 \div \text{ } = 3 \text{ crackers}$$

- To find 50%, or $\frac{1}{2}$, of a number, divide the number by .

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Understanding Friendly Percents

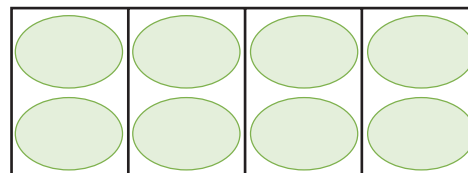
Victor ate 25% of the 8 grapes in his lunch. How many grapes did he eat?

$$\frac{\text{ }}{100} = \frac{1}{4}$$

To find 25%, or $\frac{1}{4}$, of a number, divide

the number by .

$$25\% \text{ of } \text{ } = 8 \div \text{ } = 2 \text{ grapes}$$



To find 25% of 8, make 4 equal groups.

Instruction

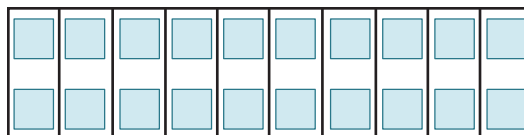
Finding Friendly Percentages

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Understanding a Percent of a Number

Mark hid 10% of the 20 blocks he was building with. What is 10% of 20?



$$\frac{10}{\boxed{}} = \frac{1}{\boxed{}}$$

To find 10% of 20, divide Mark's 20 blocks into 10 equal groups.

To find 10%, or $\frac{1}{10}$, of a number,

$$20 \div 10 = \boxed{} \text{ blocks}$$

divide the number by $\boxed{}$.

$$10\% \text{ of } 20 = 2$$

Reviewing Friendly Percents

Friendly **percents** are $\boxed{}$ percents, such as 10%, 50%, and 25%.

The **chart** shows a summary of how to use each friendly percent to find the percent of a number.

Percent	Fraction	Using Division
50%	$\frac{50}{100} = \frac{1}{2}$	$\div \boxed{}$
25%	$\frac{25}{100} = \frac{1}{\boxed{}}$	$\div 4$
10%	$\frac{10}{100} = \frac{1}{10}$	$\div 10$

Instruction

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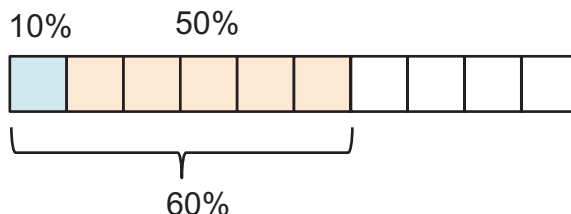
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Using Friendly Percents to Find Other Percents

What is 60% of \$300?

60% is not a percent,

but you can use friendly percents to solve the problem.



$300 \div 2 =$ 50% of 300

$300 \div 10 = +$ 10% of 300

180

60% of \$300 =

Using Friendly Percents

What is 35% of 40?

35% is not a friendly percent, but we can break 35% into 25% and 10%.

$35\% =$ $+ 10\%$

$40 \div 4 =$ 25% of 40

$40 \div 10 = + 4$ 10% of 40

35% of 40 = 14

Instruction

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Using Friendly Percents

What is 20% of 870?

$$20\% = 10\% + 10\% = 2(\text{ } \%)$$

Find 10% of 870.

$$870 \div 10 = \text{ } \text{ }$$

Add 10% + 10%

$$\begin{array}{r} 87 \\ + 87 \\ \hline \text{ } \end{array}$$

Multiply 10% times 2

$$\begin{array}{r} 87 \\ \times 2 \\ \hline \text{ } \end{array}$$

Therefore, 20% of 870 = 174.

Summary

Finding Friendly Percentages

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Lesson
Question

How can you use friendly percents?

✓

Answer

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Review: Key Concepts

Percent	Fraction	Using Division
50%	$\frac{50}{100} = \frac{1}{2}$	÷ <input type="text"/>
<input type="text"/> %	$\frac{25}{100} = \frac{1}{4}$	÷ 4
10%	$\frac{10}{100} = \frac{1}{10}$	÷ 10



Summary

Finding Friendly Percentages

Use this space to write any questions or thoughts about this lesson.