



A Percent of... A Fraction of ...

Suggested Time: 45 minutes

What's important in this lesson:

In this lesson, you will learn to solve problems involving fractions and percents; round decimal values appropriately.

Complete the following steps:

1. Read through the lessons on your own.
2. Complete all questions provided.
3. If you have any questions, ask your teacher.
4. Check your answers with the teacher.

Hand in the following:

1. Diagnostic Activity
2. Practice Problems
3. Calculations with Fractions and Percents Evaluation

Questions for the teacher:



A Percent of... A Fraction of...

Part A: Calculations with Percents

For calculations that involve percents, the percent must be changed to a decimal.

Remember: To change a percent to a decimal, divide by 100

$$\begin{aligned} \text{For example: } 25\% &= 25 \div 100 \\ &= 0.25 \end{aligned}$$

Percent of a Number

In math, the word “of” means _____

To find 30% of 140, you need to calculate:

$$\begin{aligned} 30\% \text{ of } 140 \\ &= 0.3 \times 140 \\ &= 42 \end{aligned}$$

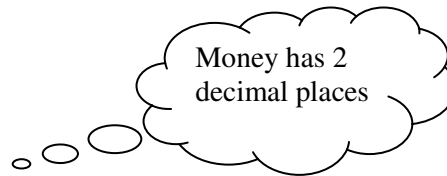
Practice

Calculate.

a) 30% of \$220

b) 15% of \$18.53

c) 25% of \$1550



Rounding Reminder

- To round a number, look at the digit to the right of the place value you are rounding to.
- If the digit is 5 or more, round up (increase the number by 1)
- If the digit is 4 or less, round down (do not change the number)



Part B: Calculations with Fractions

$$\frac{83}{100}$$

← What mathematical operation does this line indicate?

Example

To find $\frac{1}{4}$ of 140, you need to calculate:

$$\begin{aligned} \frac{1}{4} \text{ of } 140 \\ &= 1 \div 4 \times 140 \\ &= 35 \end{aligned}$$

Practice

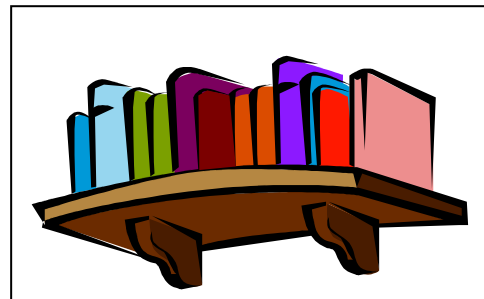
1. Calculate.

a) $\frac{1}{2}$ of 220

b) $\frac{2}{3}$ of 1800

c) $\frac{3}{4}$ of 2200

2. Refer to the bookshelf on the right to answer the questions



a) For his Geography project, Daniel read $\frac{3}{4}$ of the books that are on the shelf. How many books did Daniel read?

b) If Rachel read $\frac{1}{3}$ of the books that Daniel read, how many books did Rachel read?



Calculations with Percents and Fractions Evaluation

1. Due to high rates of HIV/AIDS in some parts of the world, many people are affected. The impact of these high rates is very clear, when using a small village of 6000 people as an example. Complete the chart. [12]

Fraction	Percent	Number of People (based on 6000 people)	Equivalent Fraction (use 6000 as the denominator)
$\frac{1}{2}$			
$\frac{1}{4}$			
$\frac{3}{4}$			
$\frac{1}{3}$			

2. Complete the statistics with actual numbers. [7]

a) The entire village, or _____% of the people, could be personally affected by HIV/AIDS.

b) Twenty-three percent, or a little under _____ of children under 15, are orphans.
(fraction)



- c) If 3000 of the village's population are children, what fraction of the village's population are children?
- (1) Between 0 and $\frac{1}{4}$
 - (2) Between $\frac{1}{4}$ and $\frac{1}{2}$
 - (3) Exactly half
 - (4) Between $\frac{1}{2}$ and $\frac{3}{4}$
 - (5) More than $\frac{3}{4}$
- d) About one-third of the 3000 children who are orphans are boys under three years old. The number of orphaned boys is about _____.
- e) Between half and three-quarters of the 700 teenage girls are infected with HIV. The number of teenage girls who are infected could range from _____ to _____.
- f) Three out of every four families are caring for AIDS orphans. If there are 1000 households, _____ families are caring for orphans.
- g) Three-quarters of the population, or _____, believe AIDS has many causes.
(percent)
They think the traditional way of men practicing unsafe sex with multiple partners is not a problem.