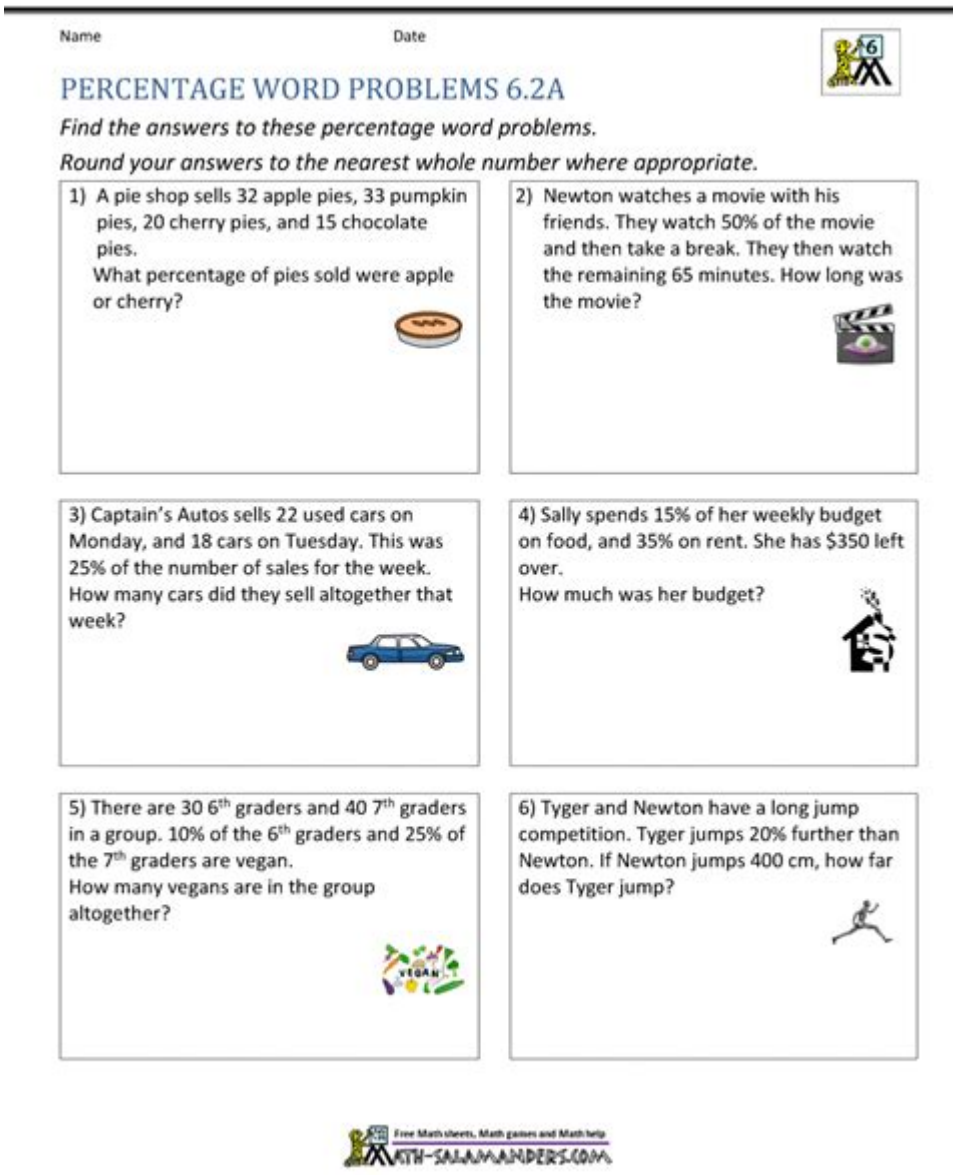
Grade 6 Math Word Problems



Name Date

PERCENTAGE WORD PROBLEMS 6.2A

Find the answers to these percentage word problems.

Round your answers to the nearest whole number where appropriate.

1) A pie shop sells 32 apple pies, 33 pumpkin pies, 20 cherry pies, and 15 chocolate pies.
What percentage of pies sold were apple or cherry?

2) Newton watches a movie with his friends. They watch 50% of the movie and then take a break. They then watch the remaining 65 minutes. How long was the movie?

3) Captain's Autos sells 22 used cars on Monday, and 18 cars on Tuesday. This was 25% of the number of sales for the week.
How many cars did they sell altogether that week?

4) Sally spends 15% of her weekly budget on food, and 35% on rent. She has $350 left over.
How much was her budget?

5) There are 30 6th graders and 40 7th graders in a group. 10% of the 6th graders and 25% of the 7th graders are vegan.
How many vegans are in the group altogether?

6) Tyger and Newton have a long jump competition. Tyger jumps 20% further than Newton. If Newton jumps 400 cm, how far does Tyger jump?

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Grade 6 math word problems can be a challenging yet engaging part of the curriculum for students. They not only test the students' mathematical abilities but also their comprehension and critical thinking skills. In this article, we will explore the nature of these word problems, strategies for solving them, and provide examples to enhance understanding.

Understanding Grade 6 Math Word Problems

Grade 6 math word problems typically involve applying mathematical concepts to real-world scenarios. At this level, students are expected to solve problems that include operations such as addition, subtraction, multiplication, and division, as well as more complex concepts like fractions, decimals, percentages, ratios, and basic geometry.

Characteristics of Grade 6 Math Word Problems

Word problems in sixth grade often share certain characteristics:

1. Real-life Context: Problems are framed in everyday situations, making them relatable to students.
2. Multi-step Solutions: Many problems require more than one mathematical operation to arrive at the solution.
3. Critical Thinking: Students must analyze the information given, identify what is being asked, and determine the best method to solve the problem.
4. Use of Different Math Concepts: Problems may integrate various mathematical concepts, challenging students to apply their knowledge flexibly.

Common Types of Grade 6 Math Word Problems

Understanding the types of problems commonly encountered can help students prepare effectively. Here are some prevalent categories:

1. Arithmetic Word Problems

These problems involve basic operations. An example might be:

Sarah has 15 apples and buys 10 more. If she gives 5 apples to her friend, how many apples does she have left?

Solution:
1. Start with 15 apples.
2. Add 10 apples: 15 + 10 = 25 apples.
3. Subtract the 5 apples given away: 25 - 5 = 20 apples.

Sarah has 20 apples left.

2. Fraction and Decimal Problems

These involve operations with fractions and decimals. An example could be:

If a pizza is cut into 8 equal slices and John eats 3 slices, what fraction of the pizza is left?

Solution:
1. Total slices = 8.
2. Slices eaten = 3.
3. Slices remaining = 8 - 3 = 5.
4. Fraction left = 5/8.

So, 5/8 of the pizza is left.

3. Ratio and Proportion Problems

These problems require an understanding of ratios and their applications. For example:

The ratio of cats to dogs in a pet store is 3:4. If there are 12 cats, how many dogs are there?

Solution:
1. Set up the ratio: Cats:Dogs = 3:4.
2. If 3 parts represent 12 cats, each part represents 4 cats (12/3).
3. For dogs: 4 parts = 4 4 = 16 dogs.

There are 16 dogs in the pet store.

4. Percentage Problems

Percentage problems often appear in financial contexts. For instance:

If a shirt costs $40 and is on sale for 25% off, how much will the shirt cost after the discount?

Solution:
1. Calculate the discount: 25% of $40 = 0.25 40 = $10.
2. Subtract the discount from the original price: $40 - $10 = $30.

The shirt will cost $30 after the discount.

5. Geometry Problems

These problems may involve calculating area, perimeter, or volume. For example:

A rectangle has a length of 10 cm and a width of 4 cm. What is its area?

Solution:
1. Area formula for a rectangle = length × width.
2. Area = 10 cm × 4 cm = 40 cm².

The area of the rectangle is 40 cm².

Strategies for Solving Grade 6 Math Word Problems

Solving word problems can be daunting, but employing effective strategies can simplify the process. Here are some useful techniques:

1. Read the Problem Carefully

Understanding the problem is the first step. Read it multiple times to grasp the details and what is being asked.

2. Identify Key Information

Highlight or underline important numbers and keywords that indicate what operations to perform (e.g., total, difference, product).

3. Visualize the Problem

Drawing diagrams, charts, or tables can help make sense of the information and visualize relationships between different elements.

4. Break It Down

If the problem involves multiple steps, break it down into smaller, manageable parts. Solve each part one at a time.

5. Check Your Work

After arriving at an answer, revisit the problem to ensure that the solution makes sense in the context provided. Recalculating can often catch small errors.

Practice Makes Perfect

To master grade 6 math word problems, regular practice is essential. Here are some resources and tips for effective practice:

1. Workbooks and Online Resources

Many workbooks and online platforms offer practice problems tailored to grade 6 math. Websites like Khan Academy and IXL provide interactive exercises and instant feedback.

2. Group Study

Studying in groups can enhance understanding. Discussing problems with peers can provide different perspectives and methods of solving.

3. Real-Life Applications

Encourage students to look for math problems in everyday life—like budgeting for a shopping trip or calculating distances during travel. This real-world application reinforces learning.

Conclusion

Grade 6 math word problems are not just a test of mathematical knowledge; they are an essential component of developing critical thinking and problem-solving skills. By understanding the types of problems, employing effective strategies, and practicing regularly, students can enhance their ability to tackle these challenges confidently. As they progress through their education, these skills will serve them well in more advanced mathematics and in real-life situations.

Frequently Asked Questions

A bakery sold 120 muffins in the morning and 85 muffins in the afternoon. How many muffins did they sell in total?

205 muffins

If a car travels 60 miles per hour, how far will it travel in 3 hours?

180 miles

Samantha has 45 apples. She wants to give 9 apples to each of her 5 friends. How many apples will she have left?

0 apples

A book has 300 pages. If a student reads 25 pages each day, how many days will it take to finish the book?

12 days

If a rectangle has a length of 10 cm and a width of 4 cm, what is its perimeter?

28 cm

There are 24 students in a class. If they are to be divided into groups of 6, how many groups can be formed?

4 groups

A pencil costs $0.50. If you buy 8 pencils, how much will you spend?

$4.00

If a train leaves the station at 2 PM and arrives at its destination at 4:30 PM, how long is the journey?

2 hours and 30 minutes

In a fruit basket, there are 15 oranges, 10 bananas, and 5 apples. What fraction of the fruits are oranges?

1/2 or 50%

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