

5TH GRADE

POWER



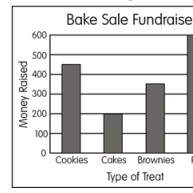
Problems & Homework

Name: _____ **POWER PROBLEMS HOMEWORK**

Answer each question below.

1.) If you round me to the nearest tenth, you get three and four tenths. What are five different numbers that I could be?

2.) The values in this graph have been rounded to the nearest hundredth. What are some possible unrounded values for the amount of money raised for selling brownies?



3.) Your math partner has written this:
 $1.304 > 1.340$
Evaluate your partner's work.

4.) Lizzie is reviewing data in a science lab. She needs to make a long list of numbers to the hundredth. She decides to look at the list of numbers, looking at the hundredth's place, to decide whether to round up or do Lizzie's method work? Why or why not?

Name: _____ **POWER PROBLEMS HOMEWORK 5.NBT.3**

Answer each question below.

1.) Carlo says that .3000 is greater than .30 because 3000 is greater than 30. Is Carlo correct? Why or why not?

2.) What decimal is equivalent to this expression:
 $6 \times \left(\frac{1}{10}\right) + 3 \times \left(\frac{1}{100}\right) + 2 \times \left(\frac{1}{1000}\right)$

3.) Vishal is comparing these two fractions to determine which one is larger: 1.206 and 1.234 .

Will Vishal need to compare the values in the thousandth's place to determine which fraction is larger? Why or why not?

4.) Write a fraction that expresses how much greater $.536$ is than $.529$.

Name: _____ **POWER PROBLEMS HOMEWORK 5.NBT.5**

Answer each question below.

1.) Explain how you figured out how many items are in a crate of 50 dozen items. What is a strategy Mark used other than multiplying?

2.) Jessica ordered 12 cases of soda for a school fundraiser. Each case has 24 cans of soda. She also ordered 18 cases of water. Each case had 6 bottles each. How many drinks did Jessica order in all?

3.) Explain why this multiplication is incorrect:
$$\begin{array}{r} 309 \\ \times 34 \\ \hline 236 \\ 270 \\ \hline 506 \end{array}$$

Why is the answer incorrect? Did he follow the correct procedure, but he does not understand why the zero with the 10 is placed there. How would you explain to him why there is a zero there?

4.) What numbers should be placed in this problem?
$$\begin{array}{r} 560 \\ \times \quad ? \quad ? \\ \hline 4480 \\ + 11200 \\ \hline 15680 \end{array}$$

Name: _____



POWER PROBLEMS
HOMEWORK 5.NBT.6

Answer each question below.

1.) A cafeteria ordered a shipment of 2,052 juice boxes. If each of the 96 students drink one juice box per day, how many juice boxes will be left after 21 school days?

2.) A farmer has 2,676 apples. He creates bags of 12 apples to sell at the farmer's market. By the end of the day he has 74 bags of apples left. How many bags did he sell at the market?

3.) Nancie and Avery are determining how many cars are needed to take students and coaches to a chess tournament. There are 32 students and 9 coaches. 6 people can fit in each car. Nancie says that they should ignore the remainder; Avery says that they should not ignore the remainder. Who is correct and why?

4.) Carlos and Jessie are making banners. Each banner needs 24 feet of fabric. They have 148 feet of fabric. Carlos says that they can make 6 banners; Jessie thinks that they can make 7. Who is right and why?

POWER Problems HD

What is included?

- 28 conceptual based math questions
- Quality prompts and word problems that promote rigorous thinking
- 4 questions per standard
- Each standard is formatted to one page
- Easy prep
- Answer keys

WHAT ARE POWER PROBLEMS?



PURPOSEFUL - These problems are meant to keep students focused, while strengthening initiative and perseverance.



OPPORTUNITIES - These prompts can be used in a variety of ways. P.O.W.E.R problems can be used to introduce a lesson, spiral review, or as formative assessments.

WITH



ENGAGEMENT - Power Problems are real word applicable and designed to hook students with interest and presentation. The complexity of problems promotes problem solving skills.



RIGOR - Tasks are specifically designed to challenge students and assess conceptual understanding of curriculum versus procedural understanding. Students will need to apply more than just a "formula."

WHY USE POWER PROBLEMS?

BUILD STAMINA WITHIN
YOUR STUDENTS



MORE THAN JUST A COOKIE CUTTER TEXTBOOK APPROACH

- P.O.W.E.R problems are designed to challenge your students with their open ended presentation. Majority of problems that come from textbooks and workbooks assess procedural understanding of curriculum. Some textbooks even provide step by step instructions where the textbook is thinking for the students and taking away that "productive struggle" for children. When we rob students of that event, we rob them of their ability to reason, problem solve, and see beyond a standard algorithm. P.O.W.E.R problems are meant to show students that there are different ways to answer one question in math. With these tasks students take ownership and are part of the problem solving process versus filling in blanks in a textbook.

HOW TO USE POWER PROBLEMS

YOUR KIDS. YOUR
CHOICE. FLEXIBILITY.



TO INTRODUCE A LESSON - P.O.W.E.R problems can be used to introduce a new skill. In this case your students will experience a "productive struggle." Their problem solving skills and prior knowledge will kick in. Often times most of my students will have the incorrect answer or no answer at all. I then have someone explain their method/reasoning and allow my students to critique their peer's answer. This makes for great accountable talk discussions. If I see that most students do not have an answer I will assist the class in getting to a specific point and then allow them to finish independently.



SPIRAL REVIEW - Avoid your students forgetting standards by using P.O.W.E.R problems to spiral review previously taught lessons.



FORMATIVE ASSESSMENTS - You can use these problems to assess mastery and levels of understanding.