

POWER PROBLEMS HOMEWORK Edition

3RD GRADE

Name: _____

POWER PROBLEMS HOMEWORK

Answer each question below.

1.) Fill in the graph to show that Lenore has raised \$15, Julio raised \$40, Sally raised \$25, and Lee raised \$30.

Amount of Money Raised	
Lenore	
Julio	
Sally	
Lee	

\$ = five dollars raised

2.) Fill in the bar graph to show that Wednesday's sales were \$150, Thursday's sales were \$200, and Friday's sales were \$70.

3.) A teacher wants to divide his students into two teams. If he divides it by favorite color, which colors should be grouped together so that the groups are of equal size?

4.) The librarian has learned that check outs can be doubled for a month if an author visits the library. If the librarian wants to increase check outs in the month with the fewest check outs, which month should the author be invited, and how many books should the librarian expect to be checked out that month?

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POWER PROBLEMS HOMEWORK 3.MD.4

Answer each question below.

1.) Place the data in the chart on the line plot.

Size of beans in inches			
lentil	$\frac{1}{4}$	black	$\frac{2}{4}$
pinto	$\frac{3}{4}$	navy	$\frac{2}{4}$
kidney	$\frac{3}{4}$	chickpea	$\frac{3}{4}$

2.) A class is keeping track of how much a plant grows. How much did the plant grow in all?

Week One	One fourth of an inch
Week Two	Two fourths of an inch
Week Three	One fourth of an inch

3.) Marin is making a model car. The directions say to find a piece for the car that is $2\frac{2}{4}$ inches long. But the ruler that came with the car looks like this:

The instructions say that the marks on this ruler are a half-inch apart. Make a line to show how long the piece that Marin is looking for would be when measured against this ruler.

4.) Each day, a scientist records on the plot line how much a plant in the lab has grown overnight. What is the total amount that this plant has grown?

Name: _____

POWER PROBLEMS HOMEWORK 3.MD.5

Answer each question below.

1.) Each square is one square unit. What is the area of this figure?

2.) Which rectangle has the greatest area? Explain.

A _____

B _____

C _____

D _____

3.) Hazel has decided to replace the carpet in her bedroom with square tiles. Hazel has a square floor that is 6 feet long and 4 feet wide. She does this along one wall and finds that it takes 12 tiles to cover the entire floor. How many tiles will she need to cover the entire floor?

4.) Draw the lines that would show the unit squares in the rectangle if the length of the rectangle is 6 and the width is 4.

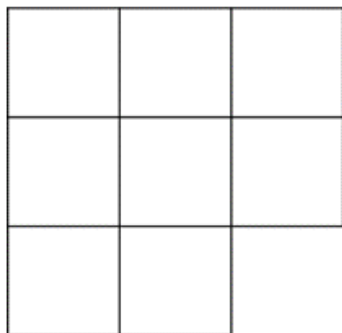
Name: _____



POWER PROBLEMS
HOMEWORK 3.MD.5

Answer each question below.

1.) If each square is one square unit, what is the area of this shape?



2.) Which rectangle has the greatest area? Explain.



3.) Hazel has decided to replace the carpet in her bedroom with tile. Each tile is a square. Hazel lines up the tiles along one wall of her bedroom and finds that it takes 9 tiles to go from one end to the other. She does this along another wall and finds that it takes 8 tiles. How many tiles will she need to cover the entire floor?

4.) Draw the lines that would show the unit squares in the rectangle if the length of the rectangle is 6 and the width is 4.



POWER Problems HD

What is included?

- 32 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.