

# 4TH GRADE

# POWER PROBLEMS HOMEWORK



homework edition

Name: \_\_\_\_\_

POWER PROBLEMS HOMEWORK

Answer each question below.

1.) True or false: A square is always a rectangle. Explain your reasoning.	2.) How many obtuse angles are formed inside this shape? An hourglass shape formed by two triangles meeting at their vertices.
3.) Can you make a quadrilateral by adding another set of parallel lines to these parallel lines? Two horizontal parallel lines with arrows at both ends.	4.) True or false: A rhombus is sometimes a parallelogram. Explain your reasoning.

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POWER PROBLEMS HOMEWORK 4.G.3

Answer each question below.

1.) True or false: A rectangle has 3 lines of symmetry. Explain your reasoning.	2.) Draw a line of symmetry for this figure. A regular pentagon.
3.) The dotted line is a line of symmetry for a shape that is partially missing. Draw the rest of the shape. A shape that is a square with a vertical dotted line down the center, and the right half is missing.	4.) The dotted line is a line of symmetry for a shape that is partially missing. Draw the rest of the shape. A shape that is a semi-circle with a diagonal dotted line from the center of the flat side to the top edge.

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POWER PROBLEMS HOMEWORK 4.G.1

Answer each question below.

1.) Draw the following: a ray, an angle, a line, and a parallel line.	2.) How many acute angles are there inside this shape? How many obtuse angles? A shape that looks like an arrow pointing to the right, formed by a rectangle with a triangle cut out of the left side.
3.) Draw three shapes with parallel lines.	4.) Arrange three rays to form a right triangle.

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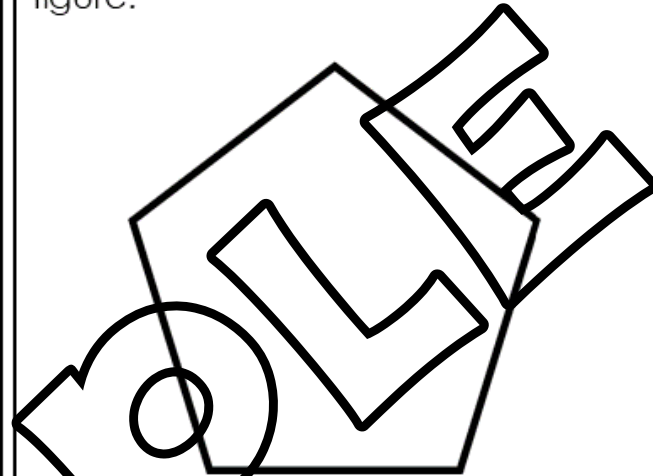


POWER PROBLEMS  
HOMEWORK 4.G.3

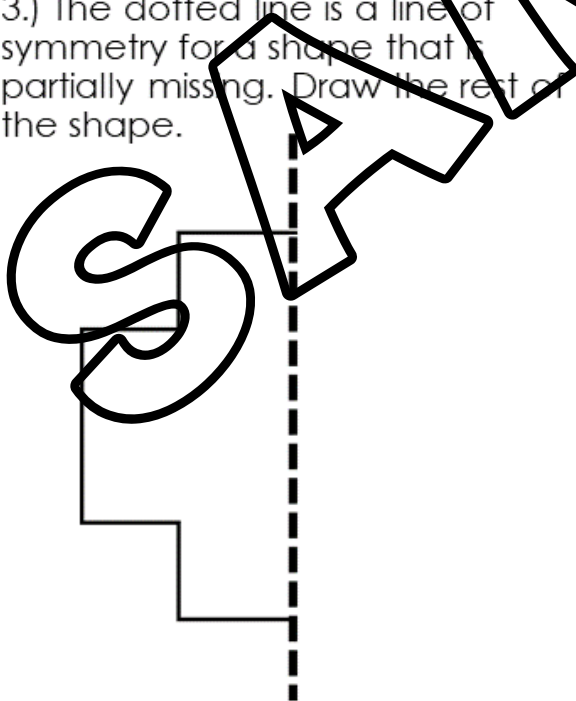
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1.) True or false: A rectangle has 3 lines of symmetry. Explain your reasoning.

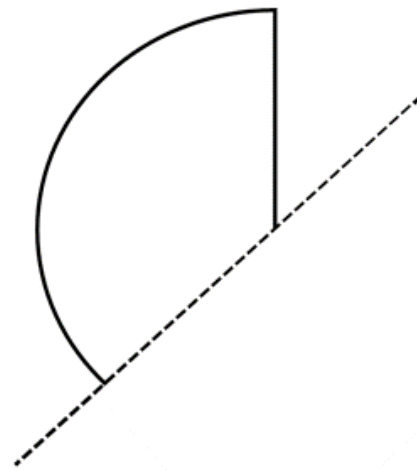
2.) Draw a line of symmetry for this figure.



3.) The dotted line is a line of symmetry for a shape that is partially missing. Draw the rest of the shape.



4.) The dotted line is a line of symmetry for a shape that is partially missing. Draw the rest of the shape.



# POWER Problems HD

## What is included?

- 12 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.