

POWER PROBLEMS

5TH GRADE

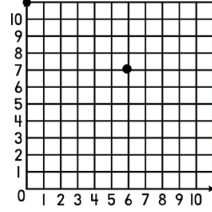
Problems & Homework Edition



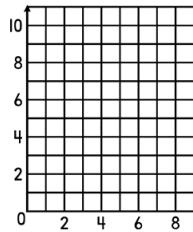
Name: _____ POWER PROBLEMS HOMEWORK 5.G.2

Answer each question below.

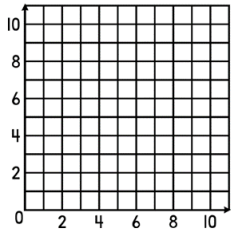
1.) Jazmine says that the point on the graph is (6,7), but Macen thinks it is (7,6). Who is correct and why?



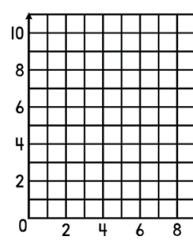
2.) Connect these points in order: (3,5), (3,9), (6,9), (6,3), and (6,5). What number formed?



3.) Create a line on the coordinate system that includes the points (2,3) and (9,3). If you were to draw another line that is parallel to the first line, would it be horizontal or vertical?



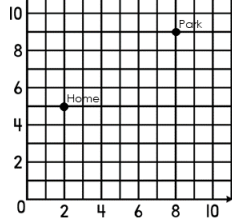
4.) A robot starts at (0,0). It moves forward until it reaches (7,0). It turns left and walks forward 3 spaces. What is its ending coordinates?



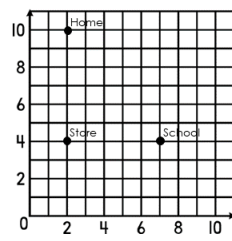
Name: _____ POWER PROBLEMS HOMEWORK 5.G.2

Answer each question below.

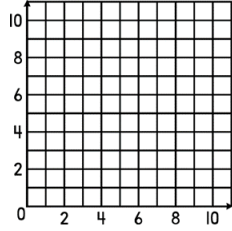
1.) You want to walk from the park to your home. If you want make exactly one turn on your walk, what are the coordinates of two different places where you could turn?



2.) Use the coordinate system to describe a route that you could take from home to school if you wanted to stop at the store on your way.



3.) Delphi has \$3.00. For each hour that she sells lemonade, she earns \$3. Show her earnings on the graph for two hours of work.



4.) Bruno says that if you draw a square on a coordinate system, you will only need to use four different numbers to describe its corners. Cory says that you will need to use eight different numbers since a square has four corners and each corner has two numbers in its coordinates. Who is correct and why?

Name: _____ POWER PROBLEMS HOMEWORK 5.G.3

Answer each question below.

1.) Complete the blanks using these words: rectangles, squares, trapezoids, parallelograms, rhombuses, kites, and octagons. _____ and _____ have _____ sides. But _____ have lengths that are equal on their widths, while all _____ are the same. _____ are the same, but not all _____ are _____.

2.) Hector says that all quadrilaterals have to have right angles. Is Hector correct?

3.) A certain polygon is a quadrilateral shape: I have four sides and all four of them are straight lines. I have at least two right angles. My length is different than my width. What is the name of this polygon?

4.) A certain parallelogram has four right angles. What is another name for this parallelogram?

Name: _____



POWER PROBLEMS
HOMEWORK 5.G.3

Answer each question below.

1.) Fill in the blanks using these words: rectangles and squares.

Both _____ and _____
have four sides. But _____
may have lengths that are
different from their widths, while all
sides of a _____ are the same
length. So, all _____ are
_____, but not all _____
are _____.

2.) Hector says that all
quadrilaterals have to have right
angles. Is Hector correct?

3.) Mystery shape: I have four
sides, and they are straight lines. I
have at least two right angles. My
length is different than my width.
What am I?

4.) A certain parallelogram has
four right angles. What is another
name for this parallelogram?

SAMPLE

POWER Problems HD

What is included?

- 16 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.