

5TH GRADE

POWER



Problems & HD

homework edition

Name: _____ POWER PROBLEMS HOMEWORK

Answer each question below.

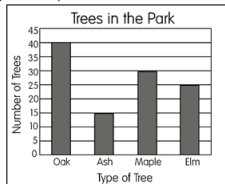
1.) Where could you place parentheses in order to make this statement true?

$$4 + 2 \times 8 - 4 \div 2 + 25 = 33$$

2.) Where could you place parentheses in order to make this statement true?

$$20 + 200 - 120 \div 4$$

3.) Lei says that the expression to find the total number of trees in the park requires parentheses. Is Lei correct? Why or why not?



4.) Which operation will be 5th when this problem is solved?
 $3[5(100 - 50) + 2(60 + 2)]$

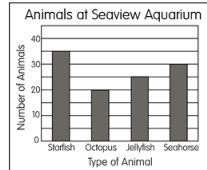
Name: _____ POWER PROBLEMS HOMEWORK 5.OA.2

Answer each question below.

1.) Write an expression that describes what happens if Marco buys six packages that each have 50 Legos in them and then he loses 10 pieces.

2.) Describe how much smaller 10×6 is than $5(10 \times 6)$ without actually calculating the answer.

3.) Crystal says that the expression $2(35) + 2(25)$ expresses the total number of animals in the aquarium. Is Crystal correct? Why or why not?

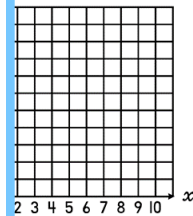


4.) Marissa argues that the expression $3(10 + 20)$ and $30(1 + 2)$ have the same value. Is Marissa correct? Why or why not?

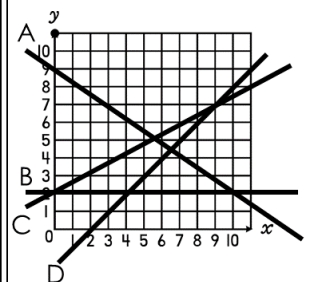
Name: _____ POWER PROBLEMS HOMEWORK 5.OA.3

Answer each question below.

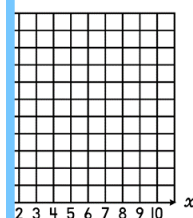
1.) Mark and Jose sell magazines. For each hour Mark sells two magazines. Jose sells one magazine. Make a graph that shows their sales.



2.) Which line reflects the rule "subtract 2"?



3.) Mark wants to graph the rule "divide by 50." Is this an appropriate graph for her to use? Why or why not?



4.) What rule was used to create this sequence of numbers?

1, 1, 2, 3, 5, 8, 13, 21, 34, 55

Name: _____



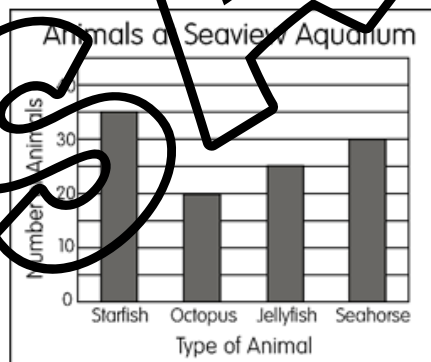
POWER PROBLEMS
HOMEWORK 5.OA.2

Answer each question below.

1.) Write an expression that describes what happens if Marco buys six packages that each have 50 Legos in them and then he loses 10 pieces.

2.) Describe how much smaller $10 \cdot 6$ is than $5(10 \cdot 6)$ without actually calculating the answer.

3.) Crystal says that the expression $2(35) + 2(25)$ expresses the total number of animals in the aquarium. Is Crystal correct? Why or why not?



4.) Marissa argues that the expression $3(10 + 20)$ and $30(1 + 2)$ have the same value. Is Marissa correct? Why or why not?

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.