

6TH GRADE

POWER PROBLEMS

Bundle

Name:
The water level of Lake Okechobee was recorded for seven days.
In which day did the water level drop the most?
In which day did the water level rise the most?

Name:
Here is a list of places in California that are below sea level:
Which place is the lowest below sea level?

Salton Sink	217 feet below sea level
Desert Shores	200 feet below sea level
Westmorland	157 feet below sea level
Badwater Basin	279 feet below sea level
Coalinga	184 feet below sea level

Name:
Mrs. White spent \$34.76 on 22 fidget spinners for her class. Mrs. White spends \$1.50 for each fidget spinner. How much money did she have left? Which teachers' fidget spinners are less? How much money did she have left?

Name:
A rectangular prism has a volume of 1,280 cubic inches. The area of the base is 256 square inches. What is the height of the prism?

Name:
You have $\frac{5}{6}$ of a pizza left. Your friend eats $\frac{2}{3}$ of what is left and then you divide the remaining pizza into 3 slices. What fraction of the original pizza is each slice?

Name:
Make a stem-and-leaf plot for the following data:
12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40, 42, 45, 48, 50, 52, 55, 58, 60, 62, 65, 68, 70, 72, 75, 78, 80, 82, 85, 88, 90, 92, 95, 98, 100

145 QUESTIONS!

WHAT ARE P.O.W.E.R 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 - Problems are real word applicable and designed to hook students with interest and presentation. 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 P.O.W.E.R 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 P.O.W.E.R 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.

Name:

The table below shows the number of instruments in the school band.

Write each ratio 3 ways.

- flutes to trumpets?
- saxophones to tubas?
- trumpets to flutes & clarinets?
- trombones to all instruments?



**POWER
PROBLEM**

6.RP.1

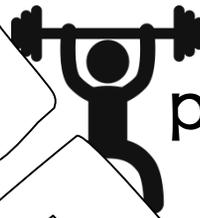
Instruments in the school band
Flutes: 4
Clarinets: 6
Trumpets: 3
Saxophones: 5
Trombone: 1
Tuba: 2
Percussion: 3

Name:

The table below shows the number of instruments in the school band.

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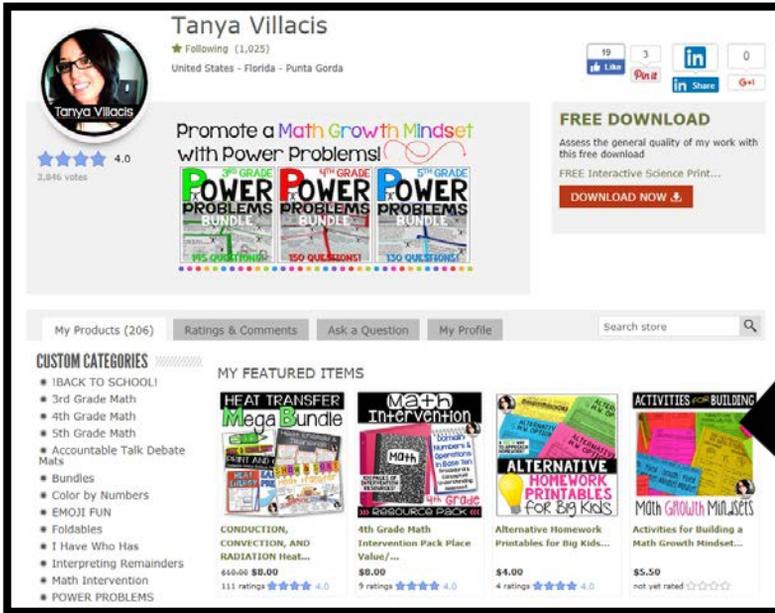
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6.RP.1

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this PRODUCT!



Tanya Villacis
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- Interpreting Reminders
- Math Intervention
- POWER PROBLEMS

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meets
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The 4th
Grade Fix

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