

POW #13

The Dog, The Geese, and the Corn

This is an old problem with a new twist. A poor farmer is going to market with his faithful but hungry dog, two plump geese to sell, and three bags of corn. The farmer knows that unless he is right there, the dog will eat a goose or a goose will eat some corn.

Traveling carefully, he avoids trouble until he comes to a small river which he must ferry across. There is a creaky old rowboat that is in such bad shape, it will only hold him and any two of the six things at one time.

How many times does the farmer need to cross the river to get all of his possessions safely to the other side?

Note: The only way across the river is in the boat. Swimming or holding onto the boat are not legal.

POW GUIDELINES

Number and label the 4 parts of your write-up.

1. *Complete heading*

2. **Problem Statement.**

In your own words, tell what you are asked to do—include the essential details and the question.

3. **Process.**

Show all your work. Refer to the problem to give reasons for each step. Write enough (several paragraphs) to show that you really tried to solve the problem.

4. **Solution.**

Write your answer in a sentence which refers to the problem. Explain why your answer makes sense. Show a check if you can.

5. **Evaluation.**

Write complete sentences to answer these questions:

- How do you feel about this POW? Why?
- Did anyone help you?
- Does this remind you of any other problem?
- Tell one thing you learned.
- What rubric score should you get? Why?

EXTENSIONS. (Extensions are optional) If the POW is easy for you, try the extensions. Write a paragraph for each—the extensions do not require 4-part write-ups.

FIRST EXTENSION: A 200 lb. man and his two daughters who each weigh 100 lbs. are standing on the bank of a river teeming with piranha. They want to get to the other side, but their canoe can hold no more than 200 lbs. How can they get across?

SECOND EXTENSION: Make up another problem involving a group that needs to cross a river in a boat.