

Habits of Mind #4

Purchasing Pens

Meixia went to the store to purchase ink pens. She found three kinds of pens. The first cost \$4 each; the price of the second kind was 4 for \$1; and the cost for the third kind was 2 for \$1. She bought 20 pens and she bought at least one of each kind. The total cost was \$20.

When she returned to her office, Meixia decided to turn this into a math problem for me. She asked: how many of each kind of pen did I purchase? Your task is to solve the problem for me.

Grading Criteria: A complete answer to this problem will satisfy the following conditions:

- (1) Answer the question: how many pens of each kind did Meixia purchase?
- (2) Show that the purchase you selected will cost \$20 for 20 pens and determine whether there is more than one answer to the question or just one answer.
- (3) Provide an explanation that shows how you solved the problem, including the question as to whether there is more than one answer.

Bonus: If you are beginning to enjoy working math problems or you just want some extra credit, you can answer the following question. Since our class has 27 students, how would the answer above change if Meixia had said she purchased 27 pens (at least one of each kind) for \$27?

Due Date: At the beginning of class on Wednesday, September 22.