

3. I put my hand into a change jar full of quarters, nickels, pennies, and dimes.

(a) How many different handfuls of 16 coins can I draw?

(b) How many different handfuls of 16 coins can I draw with at least 4 quarters and no more than 2 pennies?

Problem of the Week: Shelly thinks of two numbers between 2 and 99 and tells Ben their sum and Harrison their product.

Harrison says, "I don't know what the two numbers are."

Ben replies, "I know you don't know; neither do I."

Harrison exclaims, "I know what the numbers are now!"

Ben says, "so do I"

What are the two numbers?

Rules: This problem is for your own personal enjoyment. You can take this paper home with you and work on it over the weekend. You can work with whoever else you want to work with, just let me know who you worked with. If you have an answer, let me know after class (either verbally or in writing) or by email. Whether or not you solve this problem has nothing to do with your grade in the class. The person, or people, who solved the most weekly problems will get a fun prize at the end of the semester. Enjoy!