Ima's Dilemma

NAME_____

Ima Collector bought a box of old CDs at a garage sale. She tried counting them, but she always lost count when she got to 100. There were so many CDs scattered around! To make counting easier, she decided to divide them into equal stacks.

She started by dividing them into stacks of 16, but when she finished, there were 4 left over.

Then she tried making stacks of 18, but when she finished, there were 6 left over.

Next she tried stacks of 20, but when she finished, there were 12 left over.

When she tried stacks of 25, she had 7 left over. Not only that, her stacks of 25 wouldn't stay stacked — they kept falling over! She realized that they'd always fall over if she tried to put more than 25 CDs in each stack.

She was frustrated, so she decided to take a break and try again later. Can you help Ima?

1. From the information above, determine how many CDs she bought.

2. How she can put the CDs into stacks with the same number of CDs in each stack? How many CDs should be in each stack? Show your work and explain your answer.