

Name: Class:

GCF and LCM word problems

- ❖ Henry and Lilian are twins. Their mum bought a carton of biscuits and kept in the house for them to always take some to school. Henry plans to always remove 9 biscuits from the carton each time he wants to eat, while Lilian plans to always remove 7. A week later, Henry and Lilian are surprised to realised that they have removed the same number of biscuits from the carton so far.
What is the least possible number of biscuits that Lilian has removed from the carton?
- ❖ Henry has 42 red glass marbles and his friend, Daniels has 28 blue glass marbles. For their game, they want to form as many groups of glass marbles as possible, with each group having the same combinations of blue and red glass marbles. Also, they want to make sure that none of the marbles is left out. What is the greatest number of groups they can get?
- ❖ Mrs Tom wants to host a birthday party for her son. She intends to buy sandwich rolls, sausages, hamburger buns, and hamburger meat patties. Sandwich Rolls come in packages of 12, sausages come in packages of 6, hamburger buns come in packages of 8, and hamburger meat patties come in packages of 6.
- What is the least number of people she can serve if she buys the least number of packages of each item?
 - What is the least number of packages of each item she should buy to have enough to serve the least number of people in the party and have none left over?
- ❖ Aria just moved into a new neighbourhood and wants to invite some people to her party. She made 24 pieces of chicken, ordered 12 pieces of pizza, baked 48 cupcakes, 36 cookies and 12 brownies. She wants to split them equally among the takeout plates to share to the people she wants to invite with no food leftover.
- What is the greatest number of takeout plates she can make to share?
 - How many people can she invite to her party if each person is entitled to one takeout plate?
 - How many pieces of each food item will be in each takeout plate?

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What is the least possible number of biscuits that Lilian has removed from the carton?

1. We find the LCM of 7 and 9 to determine the least number of biscuits Lilian removed from the carton.

Multiples of 7 are : 7, 14, 21, 28, 35, 42, 49, 56, 63, 70 ...

Multiples of 9 are : 9, 18, 27, 36, 45, 54, 63, 72 ...

➡ This shows that Lilian has removed 63 biscuits from the carton.

Therefore, there will be 14 number of groups.

a- So, she can serve 24 people if she buys the least number of packages of each item.
 b- So, she should buy 2 packages of sandwich rolls, 4 packages of sausages, 3 packages of hamburger buns, and 4 packages of hamburger meat patties in other to serve 24 people with none left over.

a- So, she can make 12 takeout plates to share.
 b- Therefore, she can invite 12 people to her party so that each person can get one takeout plate without any leftover.
 c- So, there will be 2 pieces of chicken, 2 pieces of pizza, 4 cupcakes, 2 cookies, and 1 brownie in each takeout plate.