

Unit Transfer Method

Primary 5

Lesson 6: Excess & Shortage

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LESSON 6: EXCESS AND SHORTAGE**DEFINITION**

Questions are similar to Case 1-Case 2 situations in the Before and After Scenarios.
They involve “If ... ; and if ...”.

But for Excess and Shortage Scenarios, the consequence of each case (“if” situation) is always

- extras left behind (Excess \rightarrow +), or
- insufficient amount (Shortage \rightarrow -).

Model:

GUIDED EXAMPLE 1

Mrs Tan wants to give some sweets to her pupils.

If she were to give each pupil 7 sweets, she would need 4 more sweets.

If she were to give each pupil 5 sweets, there would be 4 sweets left.

How many pupils were there altogether?

GUIDED EXAMPLE 2

A teacher baked some cookies for his class party.

If he were to give each child 5 cookies, there would be 40 cookies left.

If he were to give each child 7 cookies, there would be 8 cookies left.

- a) How many children were there at the class party?
- b) How many cookies did the teacher bake for the party?

GUIDED EXAMPLE 3

Jenny baked some cookies for her teachers during Teachers' Day.

If she were to give each of them 15 cookies, she would need another 126 cookies.

If she were to give each of them 22 cookies, she would need another 252 cookies.

- a) How many teachers were there?
- b) How many cakes would each teacher get if she divided all her cookies equally among her teachers?

GUIDED EXAMPLE 4

A pet shop owner has a number of rabbits and cages.

If 10 rabbits are placed in each cage, 4 rabbits will be left behind.

If 12 rabbits are placed in each cage, 1 cage will be empty.

- a) How many cages does the pet shop owner have?
- b) How many rabbits are there?

GUIDED EXAMPLE 5

Alice has some money. If she buys 6 skirts and 10 blouses, she will have \$31 left.
If she buys 10 skirts and 6 blouses, she will have \$21 left.
Given that a blouse costs \$65, how much does she have?

GUIDED EXAMPLE 6

If Carol buys 20 apples and 16 papayas, she will have \$13.60 left.

If she buys 36 apples and 16 papayas, she will need another \$5.60.

If a papaya costs 3 times as much as an apple,

- a) find the price of each fruit.
- b) how much money does Carol have?

BUILD YOUR UNDERSTANDING

1. Bala wants to give some stickers to his friends.
If he gives each of them 6 stickers, he will have 5 stickers left.
If he gives each of them 8 stickers, he will need another 9 stickers.
 - a) Find the number of friends Bala has.
 - b) Find the number of stickers that Bala has.

2. Mr Lim bought a bag of apple-flavoured sweets for his pupils.
If he were to give each pupil 5 apple-flavoured sweets,
he would need another 50 apple-flavoured sweets.
If he were to give each pupil 10 apple-flavoured sweets,
he would need another 300 apple-flavoured sweets.
- a) How many pupils are there?
- b) How many apple-flavoured sweets will each pupil get if what
Mr Lim bought were to be distributed equally among his pupils?

3. Mr Lee has some marbles to give to his pupils.
If he were to give them 4 marbles each, he will have 68 marbles left.
If he were to give them 6 marbles each, he will not have any marbles left.
- a) How many pupils does Mr Lee have?
b) How many marbles does Mr Lee have?

4. Ali has a number of goldfishes and tanks.
If 5 goldfishes are placed in each tank, 4 goldfishes will be left behind.
If 6 goldfishes placed in each tank, 1 tank will be empty.
- a) How many tanks does Ali have?
b) How many goldfishes are there?

5. Richard had some money to buy new clothes.
If he buys 3 ties and 4 shirts, he will have \$45 left.
However, if he buys 4 ties and 3 shirts, he will have \$35 left.
Given that a shirt costs \$30, find the amount of money Richard have.

6. Tom decided to stock up on some stationery for his shop.
He ordered 100 bags, 260 notebooks, he had \$641.50 left.
If he had bought 150 bags, 350 notebooks, he would need another \$1000.
Given that each bag costs 8 times as much as a notebook,
- a) how much does each item cost?
 - b) how much money did Tom spend on all the items he ordered?