# A Maths Question, PSLE 2015

[17] Amy, Beth and Cindy had the same number of coins. Amy and Beth had a mixture of ten-cent coins and fifty-cent coins. Cindy had only fifty-cent coins. Amy had 9 ten-cent coins while Beth had 15 ten-cent coins. After Beth used all her fifty-cent coins to buy lunch, she had $10 less than Cindy in the end.
(a) Who had the most value of coins and who had the least value of coins at first?
(b) How much more did Amy have than Beth at first?
(c) How many coins did each of the girls have at first?

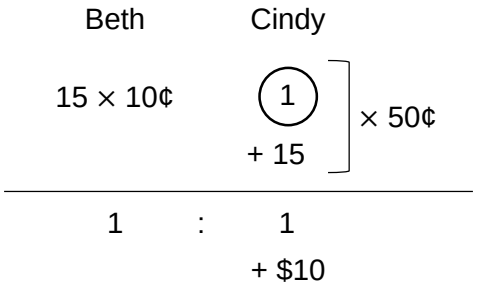
<< Multiple Diagram Maths >>

Let ① be the number of fifty-cent coins of Beth. The number of coins of each person was originally as shown in the table.

| | Amy | Beth | Cindy |
|---|---|---|---|
| 10¢ | 9 | 15 | 0 |
| 50¢ | ① + 6 | ① | ① + 15 |
| Total | 1 : | 1 : | 1 |

After Beth used all her fifty-cent coins, the relationship between Beth and Cindy is as shown below.

< G.R. >

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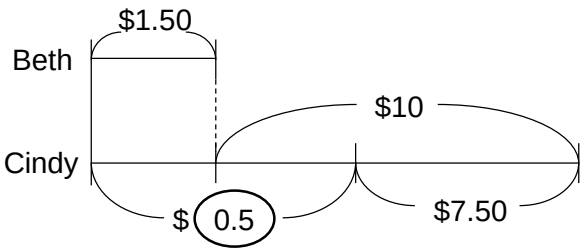


< Writing >

15 × $0.10 = $1.50
15 × $0.50 = $7.50
$0.50 × ① = $0.5
$1.50 + $10.00 – $7.50 = $4.00 → $ 0.5
$4.00 ÷ $ 0.5 = 8 (coins) → ①
8 + 6 = 14 (coins) → the number of fifty-cent coins of Amy
(c) 8 + 15 = 23 (coins) → the number of fifty-cent coins of Cindy
i.e. Each girl had 23 coins at first.
(a) 9 × $0.10 + 14 × $0.50 = $7.90 → Amy
15 × $0.10 + 8 × $0.50 = $5.50 → Beth at first
23 × $0.50 = $11.50 → Cindy
(b) $7.90 – $5.50 = $2.40

Answer (a) Cindy had the most & Beth had the least at first. (b) $2.40 (c) 23

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