

A Maths Question, PSLE 2018

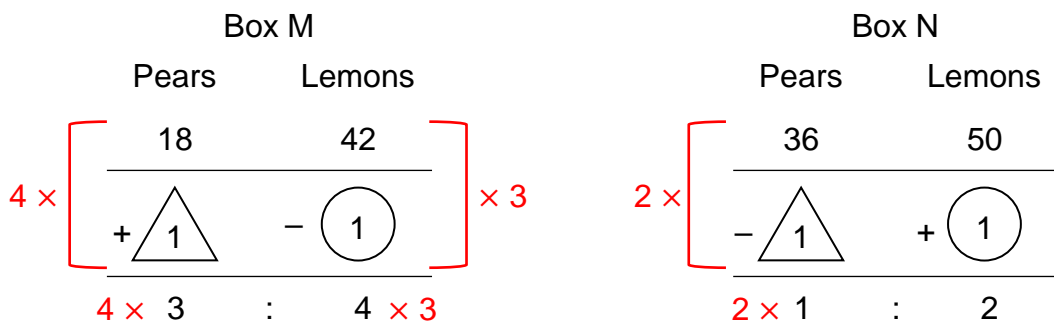
At first, Box M had 18 pears and 42 lemons while Box N had 36 pears and 50 lemons. Then, some lemons were moved from Box M to Box N and some pears were moved from Box N to Box M. In the end, Box M contained pears and lemons in the ratio 3 : 4 while Box N contained pears and lemons in the ratio 1 : 2.

- (a) In the end, how many lemons were in Box M?  
 (b) In the end, how many more pears did Box N contain than Box M?

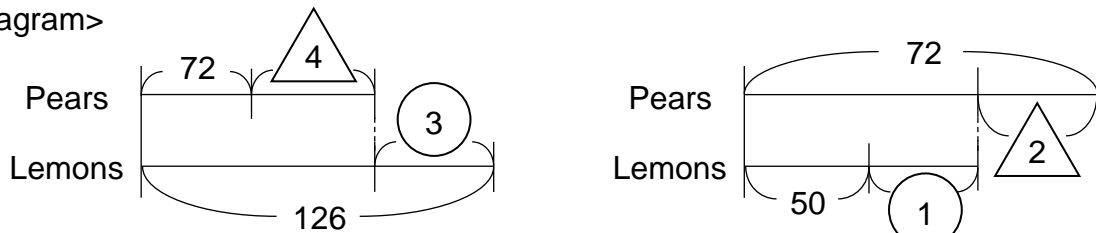
<< Erasing Maths >>

<G.R.>

Let ① be the number of shifted lemons and let  $\triangle 1$  be the number of shifted pears.



<Diagram>



<Summary>

$$\begin{array}{rcl}
 \textcircled{3} + \triangle 4 = 54 & \longrightarrow & \textcircled{3} + \cancel{\triangle 4} = 54 \\
 \textcircled{1} + \triangle 2 = 22 & \xrightarrow{2 \times} & \textcircled{2} + \cancel{\triangle 4} = 44 \\
 \hline
 & & \textcircled{1} = 10
 \end{array}$$

<Writing>

$$4 \times 18 = 72$$

$$3 \times 42 = 126$$

$$126 - 72 = 54$$

$$2 \times 36 = 72$$

$$72 - 50 = 22$$

$$2 \times 22 = 44$$

$$54 - 44 = 10 \rightarrow \textcircled{1}$$

$$42 - 10 = 32 \rightarrow \text{(a)}$$

Since  $\textcircled{1} + \triangle 2 = 22$ ,

$$22 - 10 = 12 \rightarrow \triangle$$

$$12 \div 2 = 6 \rightarrow \triangle 1$$

$$36 - 6 = 30$$

$\rightarrow$  Pears in N

$$18 + 6 = 24$$

$\rightarrow$  Pears in M

$$30 - 24 = 6 \rightarrow \text{(b)}$$

Answer (a) 32    (b) 6