

## NCC 2015

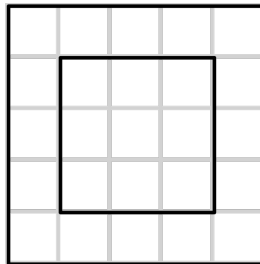
### Part A

- $47 - 29 = \boxed{18}$ .
- There are 3 original colours, 3 ways to mix two colours, and 1 way to mix all three. In total, there are  $3 + 3 + 1 = \boxed{7}$  ways.
- Since 1 book costs \$10, 3 books cost \$30. Since 1 pencil and 1 eraser cost \$3, 10 pencils and 10 erasers together cost \$30. The total cost is  $\$30 + \$30 = \boxed{\$ 60}$ .
- Ben has to give  $\boxed{4}$  books to Daniel. Then, they will both have 18 books.
- The supermarket sells potatoes in 2kg, 5kg, and 10kg bags. The prices are shown below:

Weight	2kg	5kg	10kg
Price	\$3	\$7	\$13

By trying all the possibilities, we find that the cheapest way to buy 15kg of potatoes is to buy a 5kg bag and a 10kg bag, for a total cost of  $\$7 + \$13 = \boxed{\$ 20}$ .

- By counting the squares, we see that Hiro eats 9 squares of cake and Baymax eats 16 squares of cake. Thus, Baymax eats  $16 - 9 = \boxed{7}$  more squares of cake than Hiro.



- We can make a table of the times the alarm clocks ring. Clock 1 starts ringing at 11:00 and rings every 7 minutes. Clock 2 starts ringing at 11:05 and rings every 6 minutes.

Clock 1	11:00	11:07	11:14	11:21	11:28	11:35
Clock 2	11:05	11:11	11:17	11:23	11:29	11:35

From the table, the first time both clocks ring together is  $\boxed{11:35}$ .

- We know February 4 is a Thursday. This means February 11, 18, and 25 are all Thursdays. Counting from Thursday, February 25, we get that February 29 is a  $\boxed{\text{Monday}}$ .