

Michael Davydov

Task 5

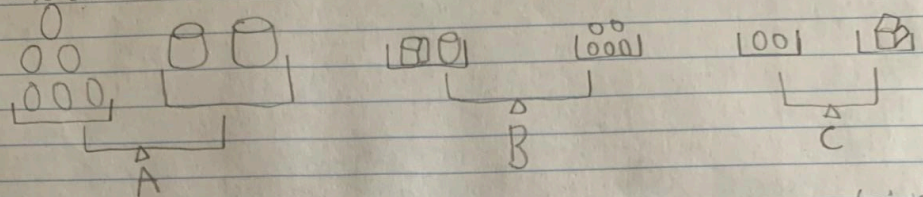
1) Balance scales

1 lb each

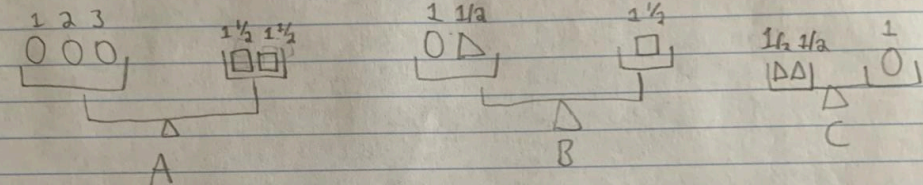
3 lb each

1 lb each
cube

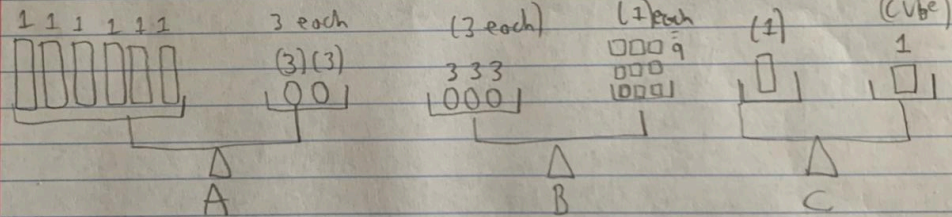
①



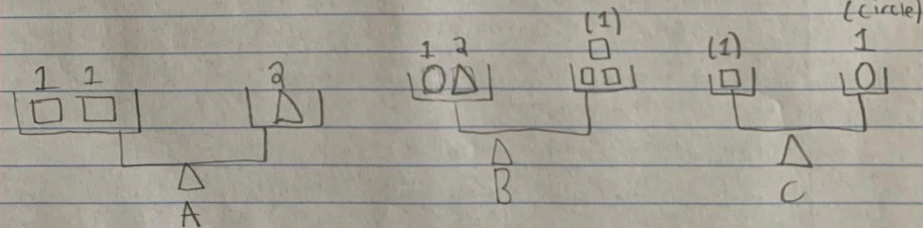
②



③



④



Exploring Square and Triangular Numbers

2) 1 4 9 16 25 36 49

+3 +5 +7 +9 +11 +13
+2 +2 +2 +2 +2

(49 → 64)

64 81 (100)

Fifth square = 25

Sixth square = 36

+15 +17 +19
+2 +2

1) 10th square number = (100)

2)

square arrays

pattern is by 2's. You add two to every second number.

1 36
4 49
9 64
16 81
25 100

Triangular Numbers

1 3 6 10 15 21 28 36 45 (55)

+2 +3 +4 +5 +6 +7 +8 +9 +10
+1 +1 +1 +1 +1 +1 +1 +1

3) 10th triangular number = (55)

4) triangular arrays

1 28
3 36
6 45
10 55
15
21

The pattern is by 1's. You add one to every number.