Number Systems in Pre-Columbian Contex

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INTD290

Date: 1/18/2021

Review of Bases

1. express the numbers below in expanded form of base-10

- $1024 = (1\times10^3) + (0\times10^2) + (2\times10^1) + (4\times10^0)$
- $2048 = (2\times10^3) + (0\times10^2) + (4\times10^1) + (8\times10^0)$
- $42 = (4\times10^1) + (2\times10^0)$
- $65{,}536 = (6\times10^4) + (5\times10^3) + (5\times10^2) + (3\times10^1) + (6\times10^0)$

2. Draw each of the numbers above as Quipu knot diagrams

1024 → 

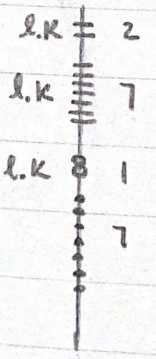
2048 → 

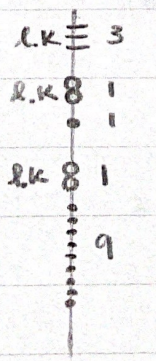
42 → 

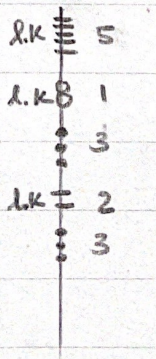
65,536 → 

2	3	5
7	11	13
17	19	23

3. Draw the following table as Quipu Knot diagram

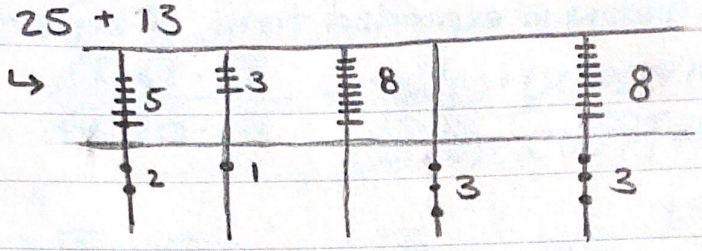




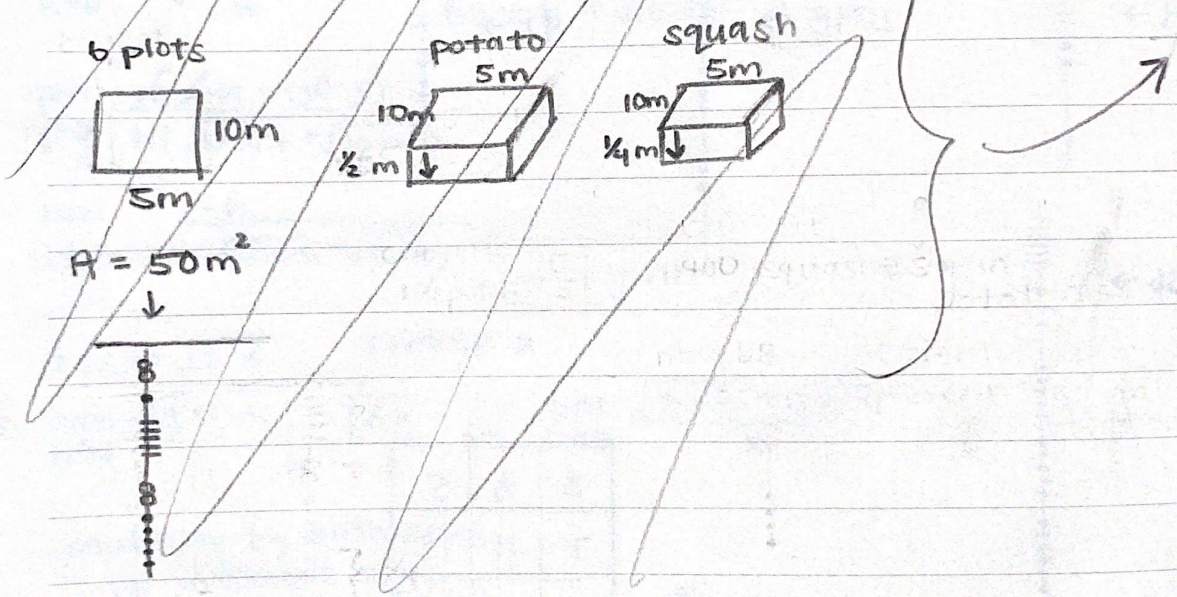


Accounting Problems

1. 25 + 13



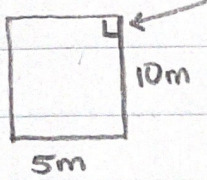
2. high altitude → potatoes → 3
low altitude → squash → -3



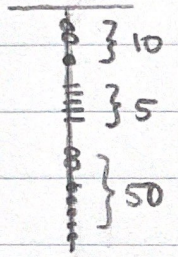
Date: _____

EAST WEST BANK

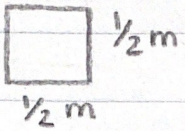
2. Plots



$A = 50m^2$



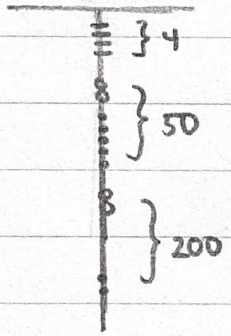
Potato plots



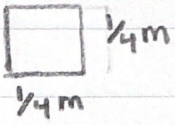
$A = \frac{1}{4}m^2$

$\frac{50}{1/4} = 50 \times 4$

$= \boxed{200 \text{ potatoes}}$



Squash plots



$A = \frac{1}{16}m^2$

$\frac{50}{1/16} = 50 \times 16$

$= \boxed{800 \text{ squash}}$