

Reasoning and Problem Solving – Place value

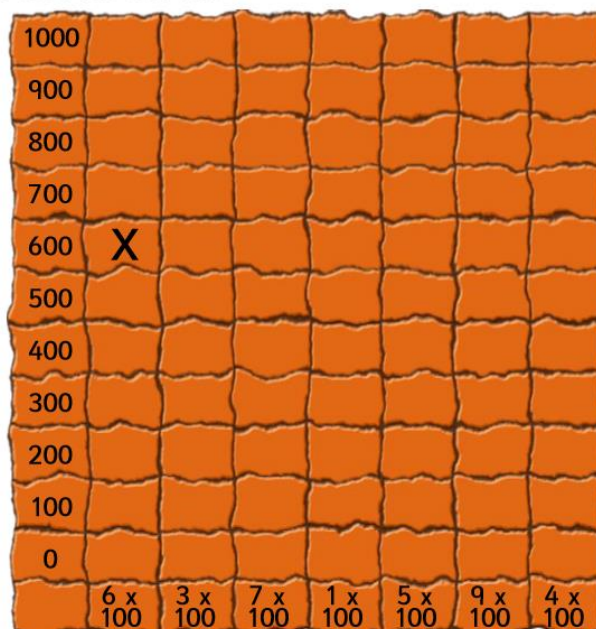
Escape from Theta

Rocano rubbed his head. He was locked in a cell! He found the secret pouch in his belt. Princess Ota had given him notes to help him escape. He read the first one.

Rocano, look at the wall! You will see numbers scratched into it. Solve the clues along the bottom! When you have an answer to a clue, look up that column of bricks and cross off the brick which is at the same height as the number of your answer. When they are all crossed off, push the bricks and a secret door will open!

Princess Ota.

1. Solve the clues and cross off the correct bricks! Princess Ota has done the first one to help.



Escape From Theta – A Way Out

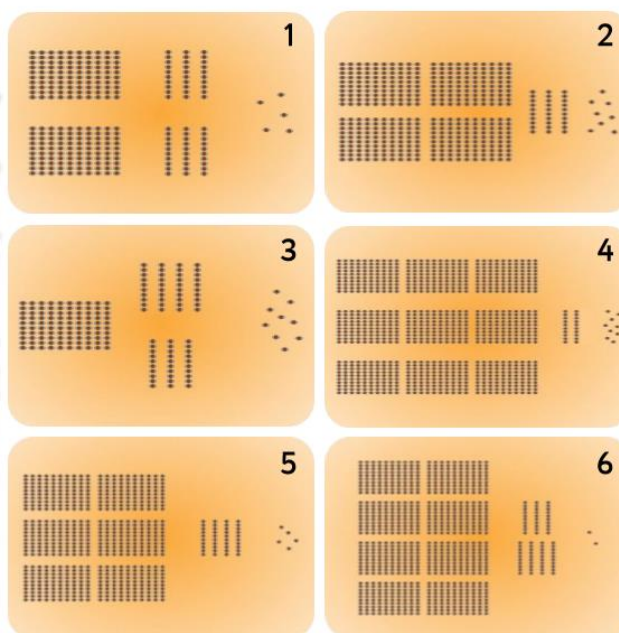
Rocano pushed the bricks. There was a creak, a rumble, and the secret door slid open! Outside the cell were 6 stairways he could go down. Which should he choose?

Rocano, look out of the windows! You'll be able to see Thetan soldiers lined up in 100s, 10s and 1s. I've written down how many you should be able to see through each window. If the numbers don't match, that means some soldiers are guarding that stairway! Only go down the stairs where the number of soldiers matches the number I have written!

Window 1: 285; Window 2: 840;
Window 3: 189; Window 4: 932;
Window 5: 645; Window 6: 882

Princess Ota.

2. Which view matches the letter?



Rocano dashed down the empty staircase. As he reached the bottom, he stopped. His escape was blocked again. Six locks held a huge door shut. How could he open them?

Rocano, to open the locks you must slide the black pegs into the correct places on the number lines. The number for each lock is below. Remember to look at the scale of each line! The number will be in a different place on each line!

625	317
489	927
193	564

Princess Ola.

3. Look at the number for each lock. Mark that number with a circle in the correct place on each of the three number lines.



Escape From Theta – Tread Carefully

Rocano burst through the door and into the next room. As his foot stepped down onto the tiled floor, it disappeared! The tile he had trodden on broke apart and fell out of sight into a deep pit. Rocano caught himself on the edge and pulled himself up. Phew! How could he get past this?

Rocano, watch your step! To get across the room safely, work out the answers to the clues below one by one and only tread on the tiles with the right numbers on them. There are wider tiles to wait on while you work out your next move.

- Step 1: 10 less than the number = 100 less than 430.
- Step 2: 100 less than the number = 10 more than 120.
- Step 3: 100 less than the number = 100 more than 650.
- Step 4: 10 more than the number = 10 less than 590.
- Step 5: 1 less than the number = 100 less than 874.
- Step 6: 10 less than the number = 1 less than 825.

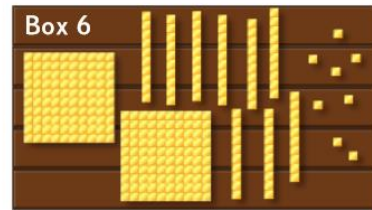
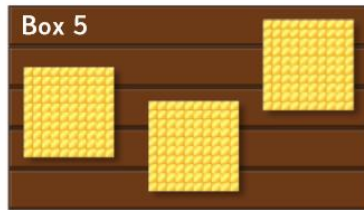
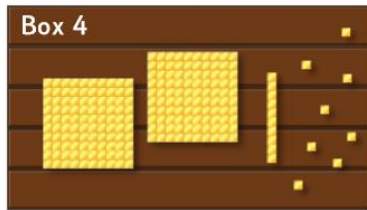
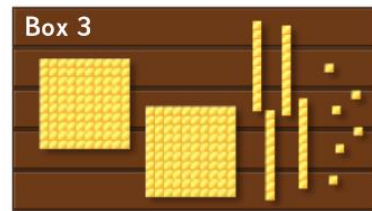
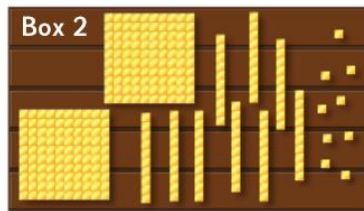
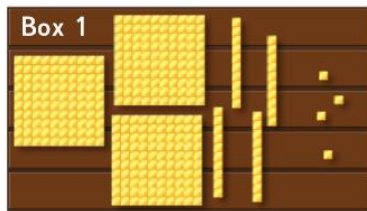
Princess Ola.

4. Circle the correct tile for each step to show the safe way across the falling floor!

Start here and head upwards →

836	846	844	834
877	776	775	875
570	550	600	590
650	850	870	750
130	30	230	110
430		340	420

Rocano stepped off the final tile and was about to run to the gate when something shiny caught his eye. It was Thetan gold! Thetan gold comes in blocks of 100 pieces, 10 pieces or 1 piece. There were 6 boxes of gold, but Rocano could only carry 3 boxes away with him. He had to make sure he got as much gold as possible!



- 5a. Put the boxes in order from most gold to least gold.
5b. Which three boxes should Rocano take?

Escape From Theta – Passwords Please

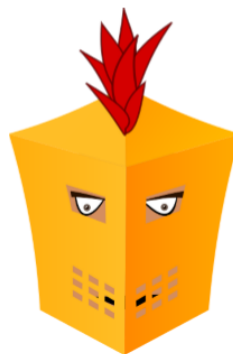
After hiding the gold, Rocano walked towards the gate. He was nearly free; just a few more steps... "Stop right there!" A Thetan soldier in a gold helmet appeared and pointed his spear at Rocano. "Anyone leaving Theta must say 'always', 'sometimes', or 'never' to six sentences! If you get any wrong, this gate stays shut!"

Write 'Always', 'Sometimes' or 'Never' under each question and help Rocano escape!

6a. When you count in 50s, the numbers are odd.

6c. Multiples of 50 are also multiples of 25.

6e. A multiple of 50 is a multiple of 5 multiplied by 10.



6b. Multiples of 50 are also multiples of 100.

6d. The ones column changes when you count in 50s.

6f. When you count in 50s, the numbers have only 2 digits.