

Summer maths escape room for IB Maths

IB Math Revision · IB Maths SL and HL (AA and AI) · Student sheet

Name _____

Class _____

Date _____

No GDC needed.

Starter (5 minutes)

1. Evaluate $\ln e^3$.
2. Find the gradient of $y = x^3$ at $x = 2$.
3. Evaluate 3^4 .

Main activity (36 minutes)

Cut out the cards. Each code unlocks the next card.

Lock 1: The shells

A geometric sequence starts 2, 6, 18, ...

- a. Find its 6th term. This is code 1.

Code for lock 1: _____

Lock 2: The tide

The second lock shows an exponential equation.

- a. Solve $3^x = \text{code 1} \div 2$. This is code 2.

Code for lock 2: _____

Lock 3: The sand

The third lock shows an integral.

- a. Evaluate $\int_0^b 2x \, dx$, where $b = \text{code 2}$. This is code 3.

Code for lock 3: _____

Lock 4: The windbreak

A right-angled triangle has hypotenuse $\sqrt{\text{code 3}}$ and one shorter side 3.

- a. Find the other shorter side. This is code 4.

Code for lock 4: _____

Lock 5: The coin

$X \sim B(n, 1/2)$, where $n = \text{code 4}$.

- a. Write $P(X = 2)$ as a fraction a/b in its lowest terms. Code 5 is $a + b$.

Code for lock 5: _____

Lock 6: The beach hut

The last lock.

- a. Find the term of the arithmetic sequence 100, 93, 86, ... whose position is code 5. It opens the hut.

Code for lock 6: _____

Extension

1. Find the sum to infinity of $30 + 10 + 10/3 + \dots$