

Ada Lovelace: Consulting Mathematician

Version 1.2

I hope you enjoy *Ada Lovelace: Consulting Mathematician*! If you want a similar game with a multi-player component, I suggest *BentoBlocks*, which you can find on my website.

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Visit my website: robin-david.com

Or get in touch on Twitter: [@robinwriting](https://twitter.com/robinwriting)

Evidence icons are from game-icons.net and released under a [CC BY 3.0](https://creativecommons.org/licenses/by/3.0/) licence.

Ada Lovelace illustration is by [Alisdair Wood](#).

Ada Lovelace: Consulting Mathematician

A solitaire roll and write game by Robin David. 10 minutes.

Background

It is the summer of 1842 and the finest mathematicians from around the world have gathered at The Archimedes' Museum of Mathematics for a grand soiree! Amidst all the merriment, a terrible crime occurs – the robbery of the priceless Lebombo Bone artefact. Evidence of the theft has been scattered across the museum grounds. Only Ada Lovelace – pioneer of the Analytical Machine and part-time sleuth – is up to the challenge of solving the crime.

Time is of the essence and she must work quickly to examine each room of the museum and assess each piece of evidence. She has only minutes before the trail goes cold.

Set Up

Print copies of the Museum Sheet and the Dice Sheet. You will use the Dice Sheet to allocate your dice to actions. You will write on the Museum Sheet. Colour is unnecessary in this game, so feel free to print both sheets in black-and-white.

Grab a pencil.

Place 6, 6-sided dice in the Reserve section in the Dice Manager, at the top of the Dice Sheet.



Ada, Countess of Lovelace (1815-1852). A gifted mathematician and writer of the first computer program.

Gameplay

Your objective is to draw polyominoes on the map of the museum so that you both surround pieces of evidence and fill rooms. You will use dice to gather these polyominoes and to unlock special abilities.

Turns

On each turn, take two dice from the Reserve section and roll them. Use each of them to either take a polyomino or to unlock an ability, as detailed on the next page. After you have used each die, place it into the Used section on the dice manager.

When you have used both of your dice, continue by taking two more dice from the reserve and rolling them in the same manner.

If only one die remains in the Reserve section, roll it and use it as normal.

When there are no more dice left in the Reserve section, return all six to the Reserve section and check off the top box on the time-tracker, on the museum sheet.

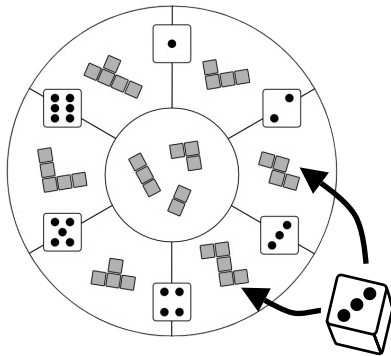
When the final box in the time tracker is checked, the game is over. Calculate your score and see if you caught the thief by consulting the chart on the next page.

- Each piece of evidence is worth 2 points
- Each room is worth an amount of points if every empty square in it has been filled (investigated) with polyominoes. The point value for each room is next to the room name.
- Some pieces of evidence give bonus points if their ability has been unlocked.

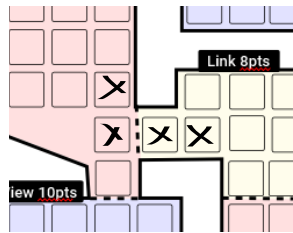
Game design by Robin David. me@robin-david.com
 [@robinwriting](https://twitter.com/robinwriting)

Take a Polyomino

On the Dice Wheel, you will see that each die value is associated with two shapes. You can use a die to take one of its two associated shapes and draw that shape onto the Museum Sheet map.

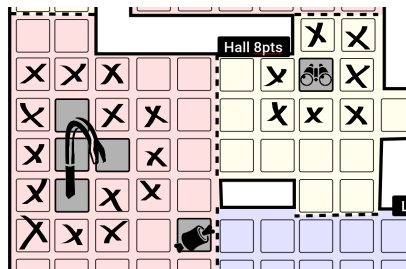


When drawing a shape, you can flip (mirror) and rotate the chosen shape as you please, but it must be drawn in its entirety. It cannot overlap with other filled-in squares and cannot leave the boundary of the museum. It can be placed between rooms (through a dashed line doorway).



Evidence squares (pre-shaded squares with icons) are considered filled and cannot be drawn in. If you completely surround a piece of evidence, you have collected it and can then circle it on the Abilities column. You will now earn points for that evidence and you can unlock its ability.

In this example, the crowbar and binoculars have been collected because they have been surrounded *completely* (including diagonal squares).



Other Things

Wild Shapes

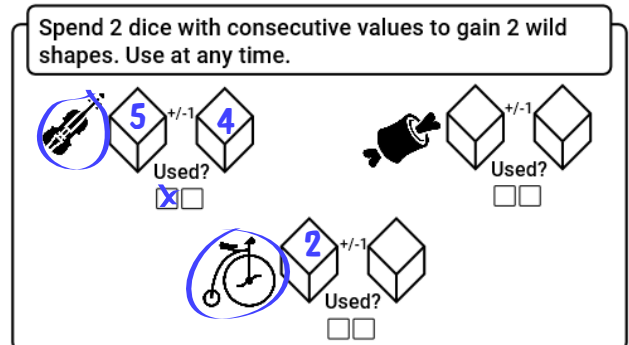
Three of the pieces of evidence (penny farthing bike, stopwatch, and ham) give you access to wild shapes. If you use these abilities, you can take any shape from the Dice Wheel, including the three special shapes in the middle. Use the check-boxes to keep track of how many wilds you have used.

Consecutive Values

This term means dice that have only one number difference between them. Eg, 4 and 5. The numbers 6 and 1 are not consecutive.

Unlock an Ability

Write the value of the die in one of the die-icons, next to a piece of evidence you have already collected. If you fill in both dice-icons appropriately, you gain the ability indicated.



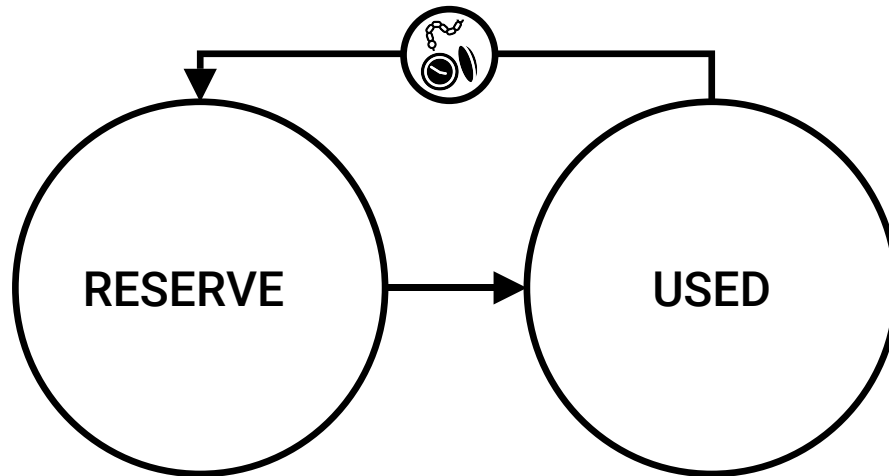
In this example, the player has collected the violin and penny farthing bike on the museum sheet, so they have circled them in the Abilities column. The player has also unlocked the violin evidence ability and used it once. They have begun to unlock the penny farthing bike ability, but have not finished it yet. Maybe they'll finish it in a future turn.

Scoring

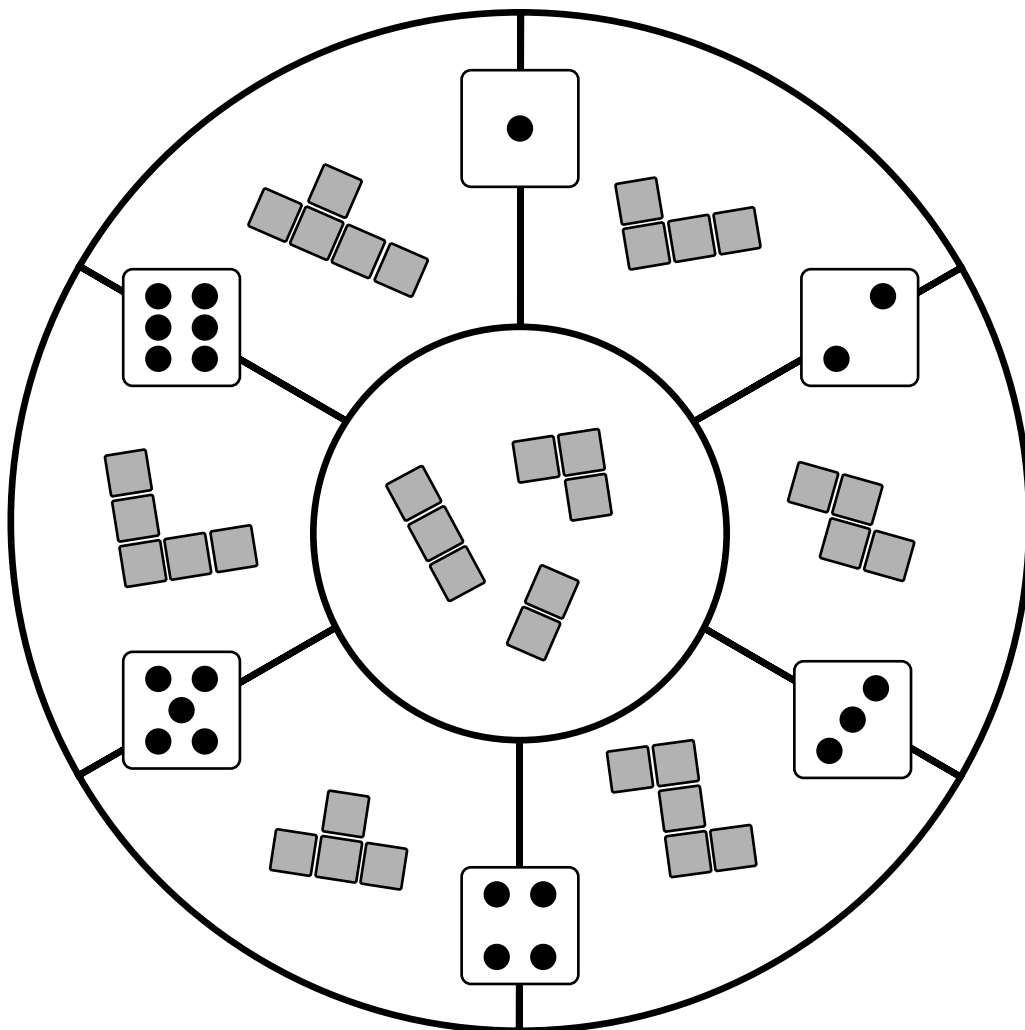
Check your final score against this chart.

- *0-29 points.* Flustered, you drop an ancient abacus on the ground, smashing it. Everybody boos.
- *30-39 points.* A few random knick-knacks do not make a convincing case!
- *40-49 points.* You have a case, but it is unconvincing. Your reputation is in tatters.
- *50-59 points.* You've gathered some decent evidence, so you blame Sir Charles Wheatstone. "Preposterous!" he yells. Others come to his defence, "He was performing on his concertina at the time." Whoops!
- *60-74 points.* You try to blame Charles Babbage and some people say, "By golly, I think she's right!" But you're not right. Charles is not amused.
- *75+ points.* You pin the blame on Lord Byron, even though he has been dead for 18 years. But your evidence is so thorough, everyone is convinced you are telling the truth. And that means nobody realises it was really you who stole the Lebombo Bone! Ada Lovelace: Master Criminal!

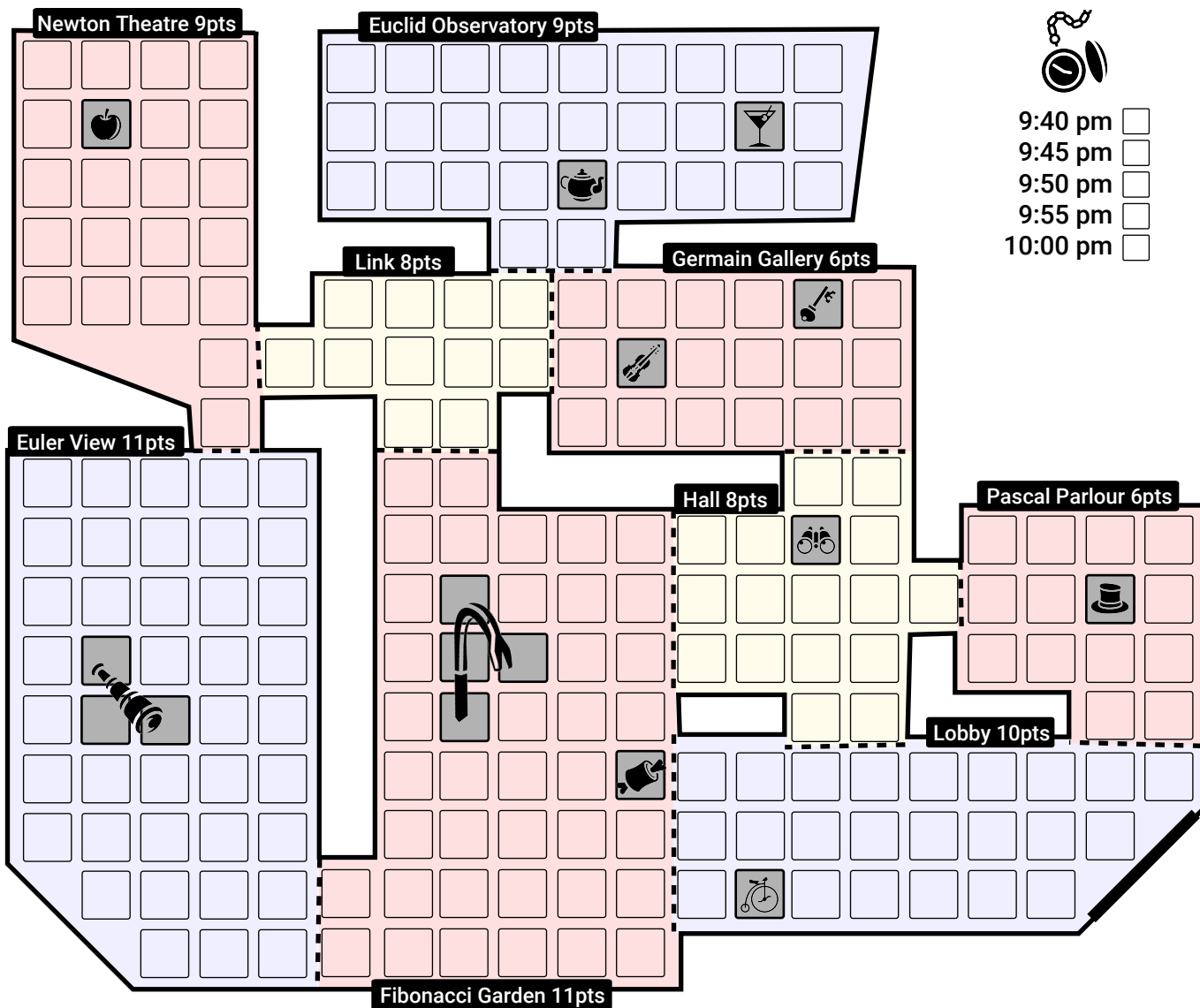
Dice Manager




Dice Wheel



The Archimedes' Museum of Mathematics



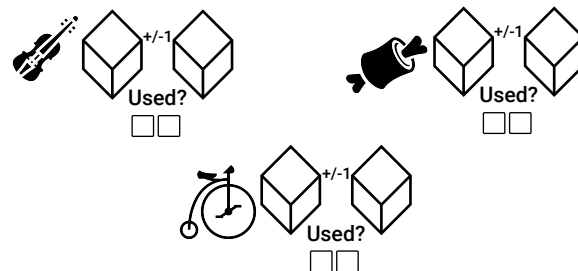

 9:40 pm ☐
 9:45 pm ☐
 9:50 pm ☐
 9:55 pm ☐
 10:00 pm ☐

Abilities

Spend 2 dice with the same value to immediately move up to 3 dice from the used pile to the reserve pile. Also, gain 3 points at the end of the game.

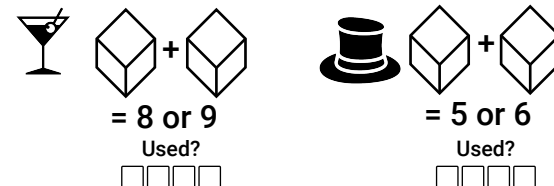


Spend 2 dice with consecutive values to gain 2 wild shapes. Use at any time.

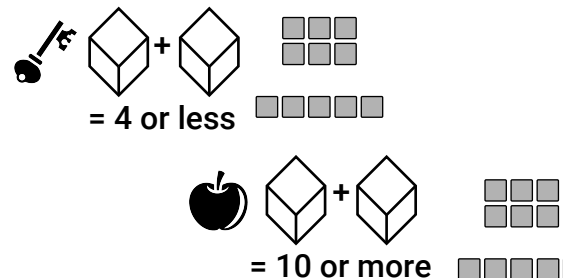


For the following abilities, spend 2 dice that sum a specific value.

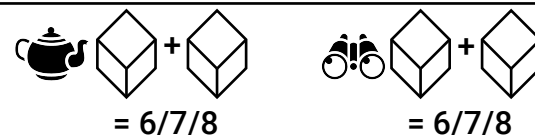
Gain 4 opportunities to re-roll 1 or 2 dice, before using them.



Gain two shapes that can be placed, once each, at any time.




Gain 7 points at the end of the game.



Scoring

Each piece of evidence = 2 points
 +
 Each complete room
 +
 Any 7 or 3 point evidence bonuses
 Total = _____




 "Stolen! The Lebombo lunar-phase counting bone. Found in the mountains near Swaziland and dated to 41,000 B.C. I believe it's priceless!"