

Louvre, France

General information			
Respective blueprint	A pyramid like the Louvre		
Description	<p>Students learn about the Louvre and Blaise Pascal's mathematical triangle.</p> <p>They enrich their mathematical knowledge of geometric shapes.</p> <p>They make a pyramid of cardboard like the Louvre.</p>		
Learning objectives	<ul style="list-style-type: none"> • Practice adding and subtracting numbers up to 1000, geometric shapes. • Gain new knowledge about the Louvre. 		
Related curricular subjects	<p>History – Knowledge of the Louvre and mathematician Blaise Pascal;</p> <p>Mathematics – various geometric and arithmetic problems and mathematical concepts;</p> <p>Technology and entrepreneurship – produce items.</p>		
Duration	80 minutes		
Level of difficulty	Basic	Medium	Advanced
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Inclusivity guidelines			
How to integrate students with SLD	<ul style="list-style-type: none"> • Formulate simple instructions that require only one action at a time. • If you give verbal instructions, make sure you follow them in the form of pictograms or written on the board. • When giving instructions (oral or written), emphasise the word of action so that students know what they are expected to do. • Where possible, you can show the expected result of the manipulation. • When creating groups, try to place students who have difficulties with students who are generally more advanced so that they can help each other. 		
How to integrate students who work faster	Faster-paced students find the circumference of the resulting triangle when making the pyramid in different ways.		

Step-by-step description of the lesson

Step 1: The Louvre

Estimated time: 20 minutes

- History

The Louvre was once the largest palace in the world. It is now one of the world's most famous galleries, having been home to thousands of works of modern and classical art – masterpieces by Leonardo da Vinci, Titian, Rubens and others. It is the most visited museum in the world.

- Virtual tour (Offline tours : <https://www.louvre.fr/en/online-tours?fbclid=IwAR3-aOzpU4zwTeeet61E0NjrSi8lDDJdSsoyCvv47nvFjYoSXj7VPw0TeM#tabs>)

Step 2: Pyramid of the Louvre – learn and create

Estimated time: 20 minutes

- Assign students to name pyramids they know.

Students name pyramids - a food pyramid, the Pyramids of Giza, etc.

- Pyramid of the Louvre

The Pyramid of the Louvre is one of Paris's three most recognisable landmarks – after the Eiffel Tower and the Arc de Triomphe. It is a large glass and metal pyramid located in the Louvre Museum's main courtyard in Paris, France. Opened in 1989, for a short time, the pyramid of the Louvre won over art lovers and became an integral part of the Paris Art Museum. The pyramid serves as the main entrance to the museum and is designed to provide a modern contrast to the classical architecture of the Louvre's historic buildings.

- Making a pyramid of paper (students are divided into teams)
 1. The pyramid comprises 4 congruent triangles and a square base.
 2. Each team draws an isosceles triangle on a cardboard of given dimensions.
 3. The triangles are glued with duct tape on the inside along the side edges.
 4. Attach the pyramid's base, which has a square shape.

Step 3: Blaise Pascal

Estimated time: 20 minutes

- Blaise Pascal – presentation

Brief information about the life and work of Blaise Pascal.

Step 3.2: Pascal's Triangle

Estimated time: 20 minutes

1. Students recall knowledge about different types of triangles.
2. They draw an equilateral triangle.
3. students draw lines and recreate Pascal's Triangle on the triangles already drawn.

Assessment activities

Activity 1: Worksheet

Each student receives a sheet with tasks. And solve problems.

Activity 2: Game "Mathematical Calculus Roll"

Each student makes a mathematical roll of cardboard cups, similar pyramid, following the steps:

- Put 7 coffee cups inside each other. If the cups are coloured, cover them with white paper tape.
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- Write the following on the cups:
 - cup 1 - the numbers 1 to 9 around the rim.
 - cup 2 - from 0 to 9.
 - cup 3 - addition sign "+" and subtraction sign "-".
 - cup 4 - from 0 to 9.
 - cup 5 - equal sign "=".
 - cup 6 - from 1 to 9.
 - cup 7 - from 1 to 9.



- Students entertain each other by setting problems and solving them with the help of the roll.

Attachments

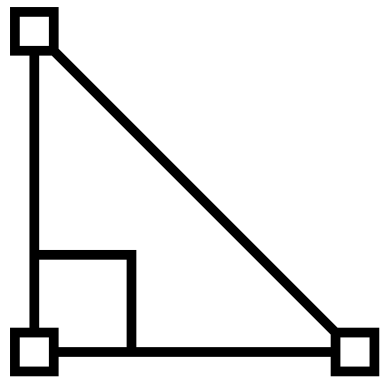
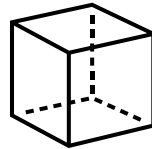
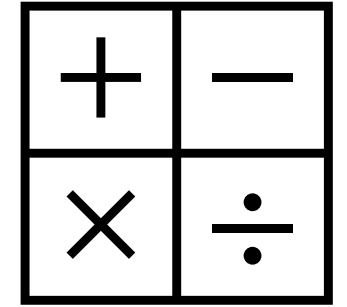
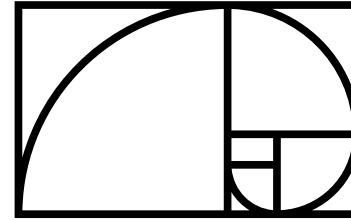
- Presentation Blaise Pascal
- Worksheet

References

https://en.wikipedia.org/wiki/Blaise_Pascal

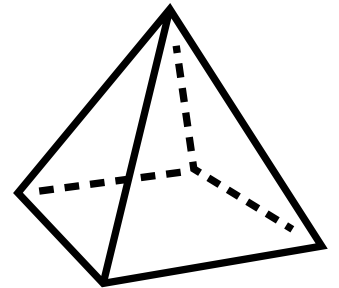
https://en.wikipedia.org/wiki/Pascal%27s_triangle

<https://thebettervacation.com/louvre-pyramid/>



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A pyramid like
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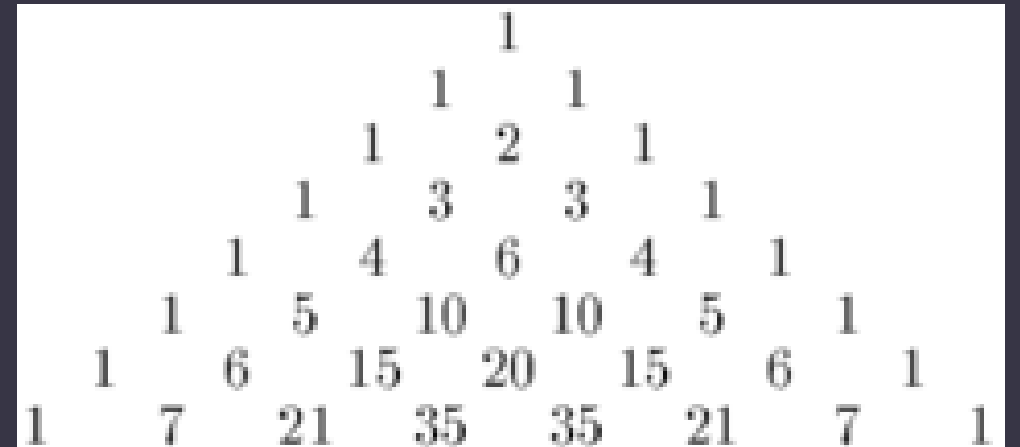
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- Blaise Pascal was a French mathematician, physicist, religious philosopher, theologian and writer. He was born on June 19, 1623 in Clermont-Ferrand, France. At the age of 17, he created a calculating machine called Pascal's Wheel. Pascal's triangles are another of his discoveries in the world of mathematics. He died in 1662 in Paris, France.

Have you ever heard of Pascal's Triangle?

It is a symmetrical numerical triangle. Each number in a given order of the triangle, except the first left and the last right, is the sum of the two numbers located on the previous row. It is used for easy calculation of number of combinations without repetitions. Blaise Pascal is a Frenchman born in 17. century. He is one of the most famous mathematicians.



Mathematical pyramid



Pascal's triangle



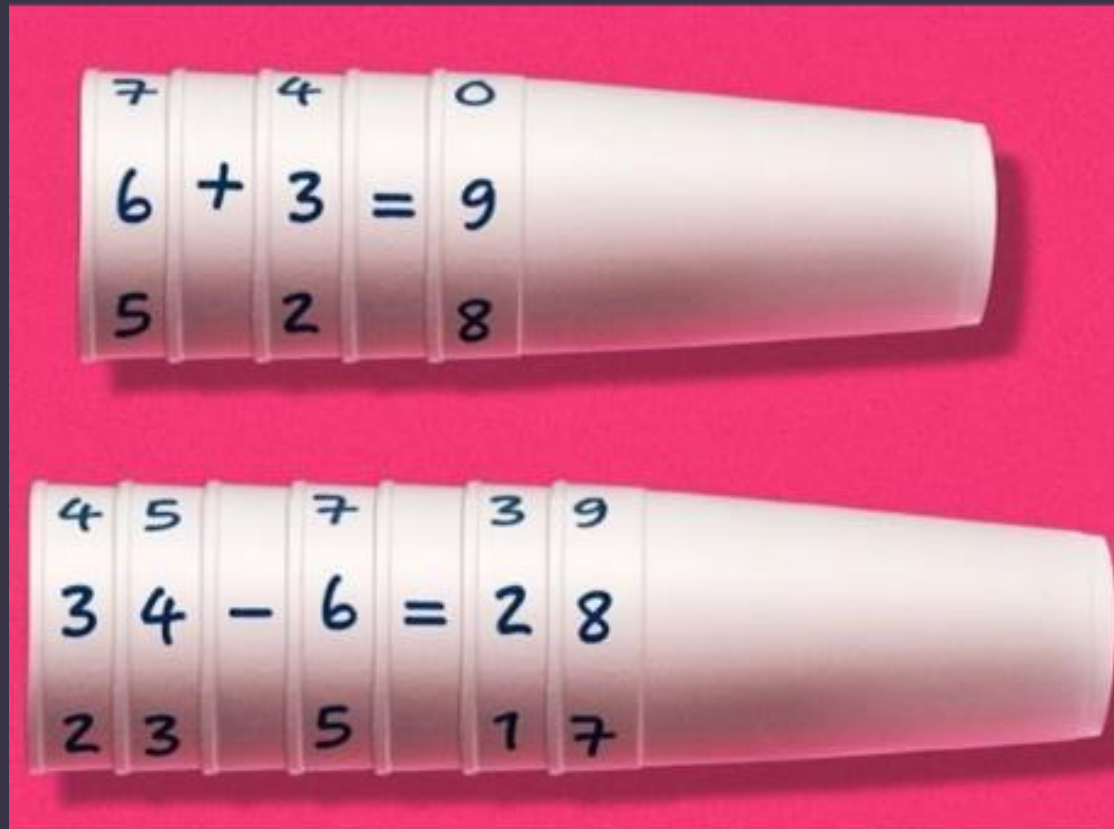
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Louvre

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Louvre





Task

- Make a math roll, have fun solving problems with it.

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