

PRIMARY SCHOOL BELTINCI, SLOVENIA
TEACHER: MAG. ANDREJKA ZVER

LESSON PLAN: COORDINATE SYSTEM

RESOURCES:

- T. Končan, V. Modrec, R. Strojan:: SKRIVNOSTI ŠTEVIL IN OBLIK 8, samostojni delovni zvezek v 5 delih,
- <http://www.iucbeniki.si/mat8/index.html>

LEVEL: **LOWER SECONDARY**

LESSON NUMBER: **1**

AGE OF STUDENTS: 12,13

UNIT: COORDINATE SYSTEM

SUBUNIT: INTRODUCTION IN THE
COORDINATE SYSTEM

GENERAL GOALS:

- plan a point with given coordinates in the plane,
- read the coordinates of a given point in the coordinate system and write them as an ordered pair of numbers,
- designate parts of the coordinate system,
- use the terms: coordinate system, coordinate axes.

VOCABULARY covered during the lesson:

coordinate system, x – axis, y – axis, origin

REQUIRED PRE-KNOWLEDGE:

basic point knowledge

SPECIFIC OBJECTIVES (specify skills / information that will be learned):

Students practice the planning of the coordinate system.
Students determine the coordinates of points in the coordinate system.
Students plan points in the coordinate system.

MATERIALS NEEDED:

- blackboard
- IWB + projector
- Computers
- Geo triangle
- Pencil

OTHER MATERIALS NEEDED: (realia, apps or programs):

- programme Geogebra
- programme Powerpoint

TEACHER	STUDENT
<p>LEAD IN:</p> <p>What is the coordinate system? Have you heard about the coordinate system? What about video games, navigation? How are we moving there?</p> <p>Example: https://www.education.com/game/treasure-map-graphing/</p> <p>ACQUISITION OF KNOWLEDGE:</p> <p>Using the image, I present a coordinate system. We name the individual parts of the coordinate system. Special emphasis is placed on the axis perpendicular to the axis and the correct axial movement.</p> <p>PLANNING THE COORDINATE SYSTEM:</p> <p>With the help of leaf sheets we plan a coordinate system. I plan through the screening process on the board. I'm showing a number of ways to indicate the coordinate system.</p> <p>POINTS IN THE COORDINATE SYSTEM:</p> <p>Using the projection, we look at how to determine the position of individual objects - points in the coordinate plane. Emphasize the starting point - origin, moving along the x-axis, moving along the y-axis and arranged pair, which determines the point.</p> <p>TACKLING EXERCISES:</p> <p>We solve examples of exercises frontally.</p>	<p>Students participate in the interview and give examples.</p> <p>Students follow explanations and repeat new concepts.</p> <p>Students follow the projection and plan on the learning leaf with a triangle and a pencil.</p> <p>Students follow the explanation and write in the learning sheets.</p> <p>Students solve exercises.</p>

COORDINATE SYSTEM

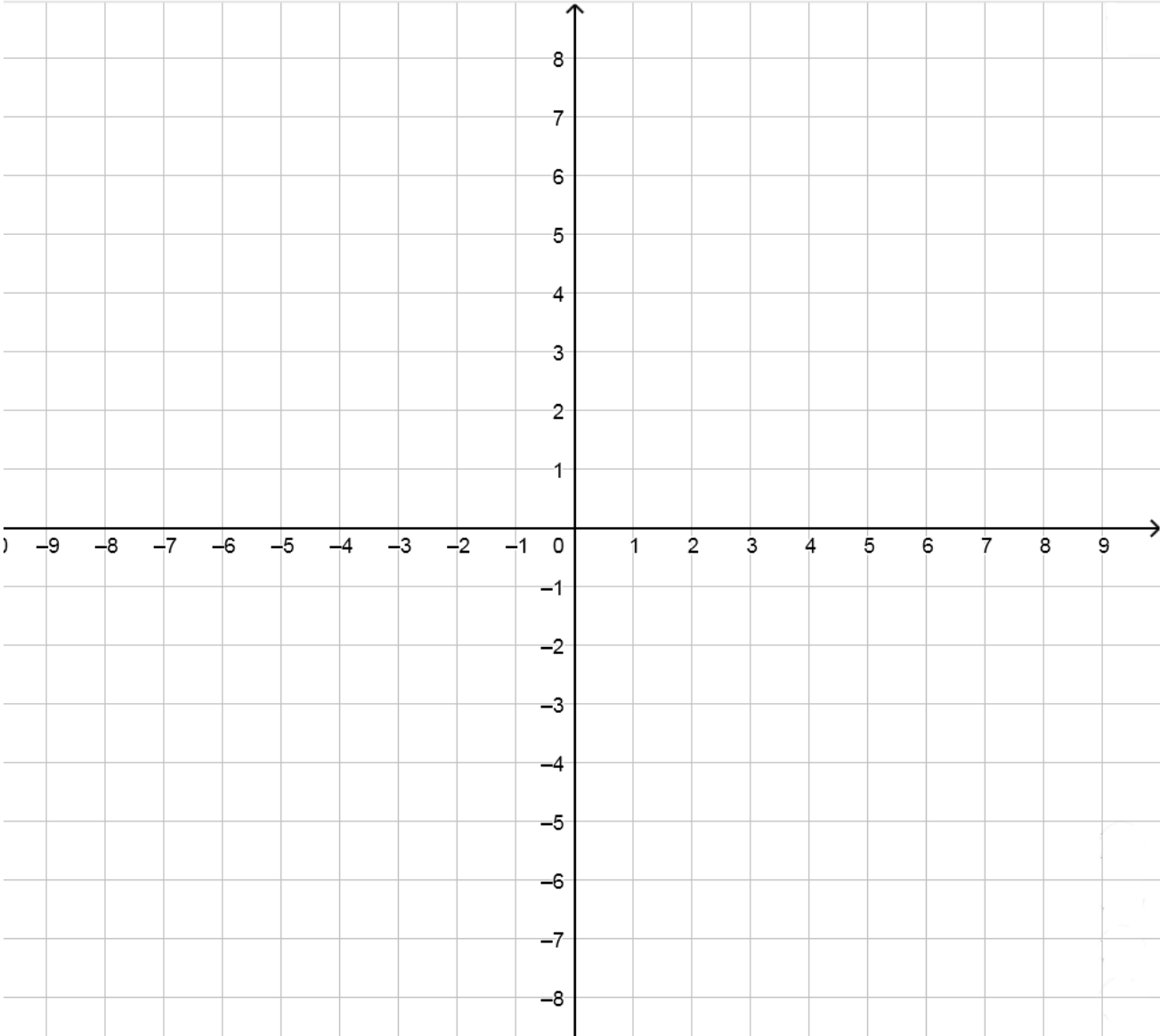


Where do I need it?

In finding a treasure, searching for specific places, when playing games.

What is it?

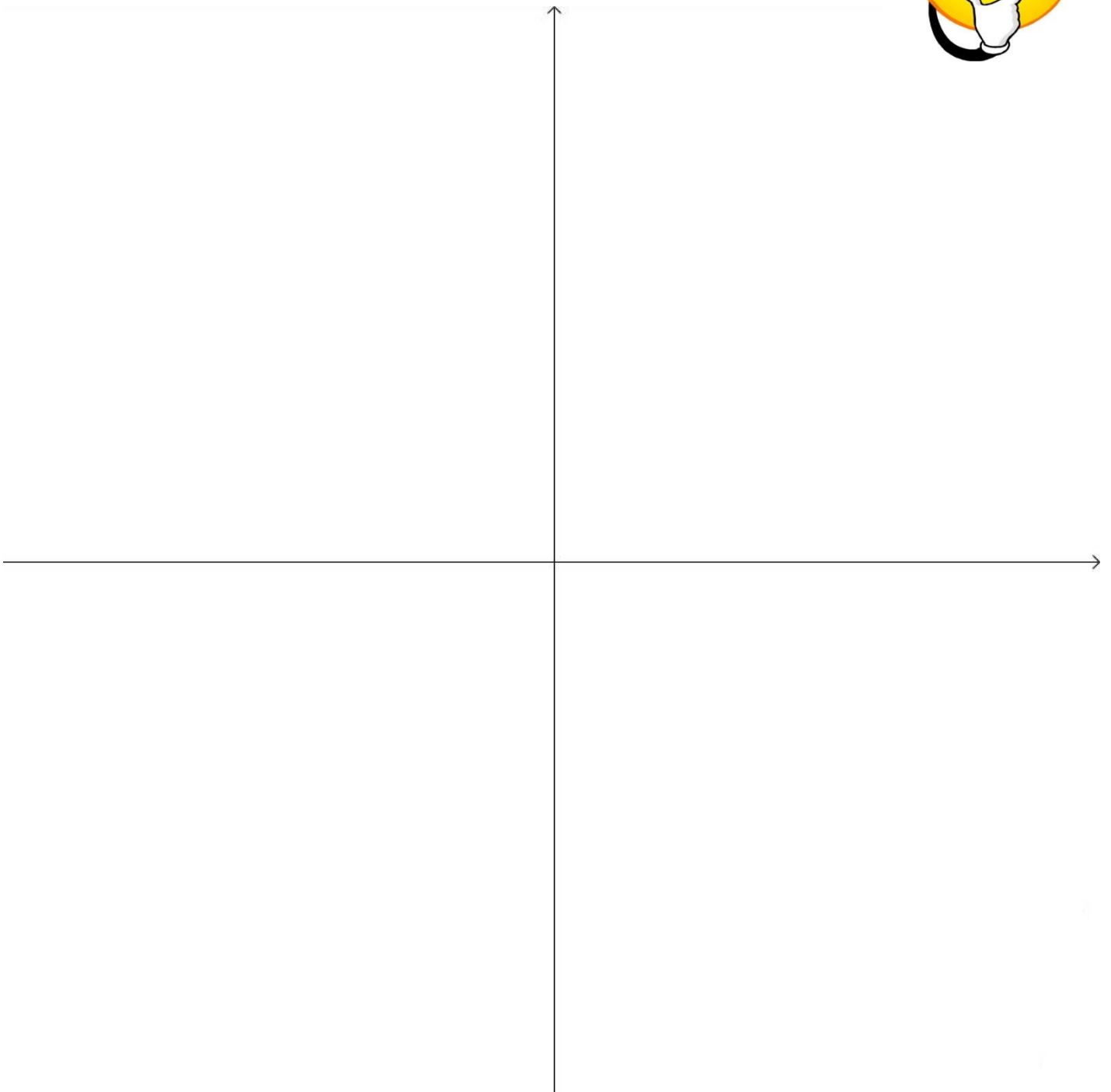
Let's see...



Cartesian coordinate system is a number plane with a horizontal line (**x-axis**) drawn at right angles to a vertical line (**y-axis**), intersecting at a point called **origin**. It is used to locate the position of a point in reference to the x-axis and y-axis.

Let's try to finish the marking of the coordinate system...

a)



b)





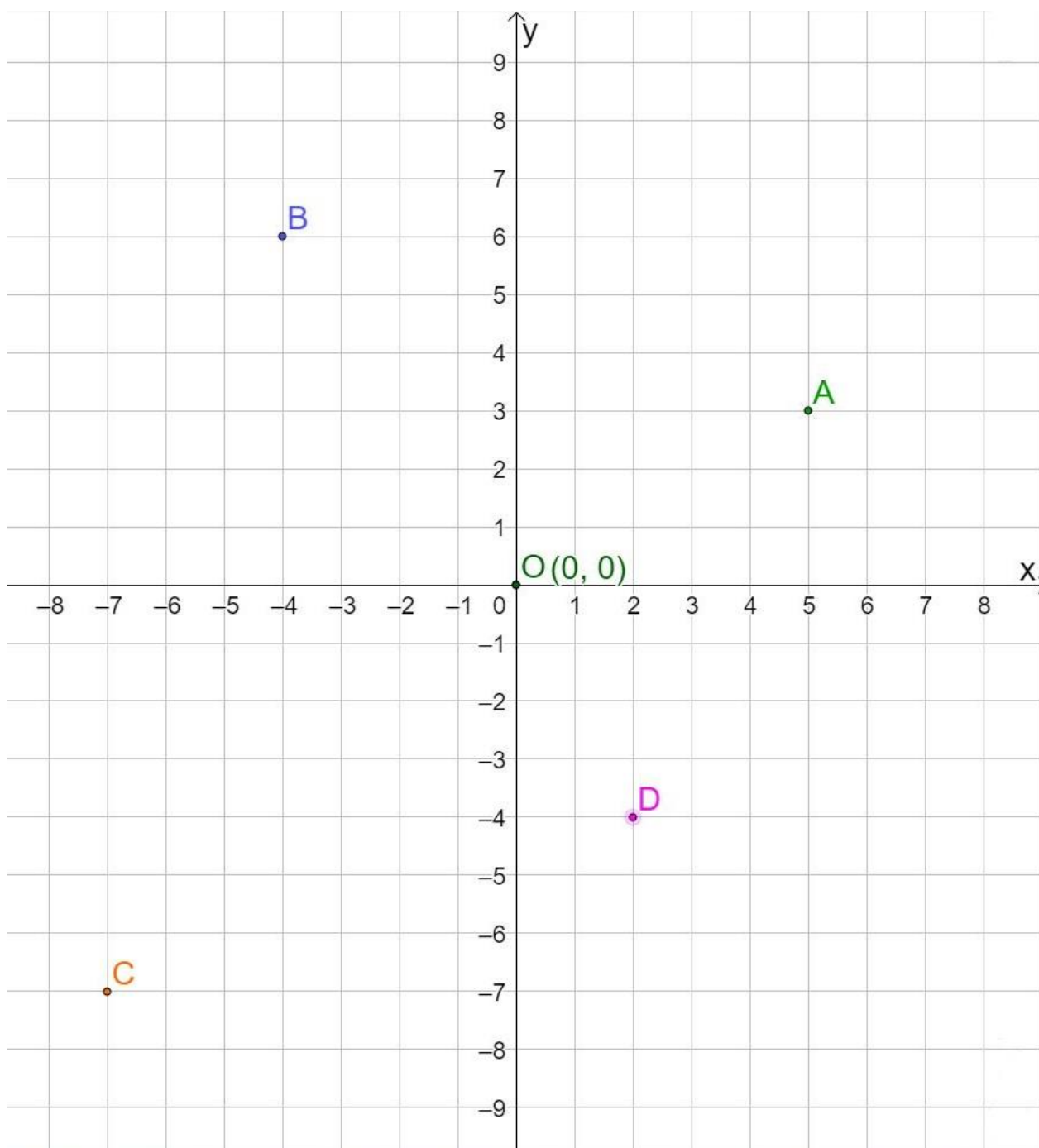
Plotting points

An ordered pair contains the coordinates of one point in the coordinate system. A point is named by its ordered pair of the form of

(x, y) .

The first number is the x-coordinate and the second is the y-coordinate.

The coordinate of the **origin O** is $(0,0)$.



How to plan the points?

