

Basic constructions	Season	3
	Episode	05
	Time frame	1 period

Objectives :

- Discover the rules of ruler and compass geometry.
- Study a few basic constructions.

Materials :

- *Ruler and compass.*
- *Task sheet.*

1 – The rules of the game

10 mins

The teacher explains the rules of ruler and compass geometry. The fact that the straightedge is not marked is emphasized, as is the difference between the compass and the divider.

2 – Challenge : basic constructions

45 mins

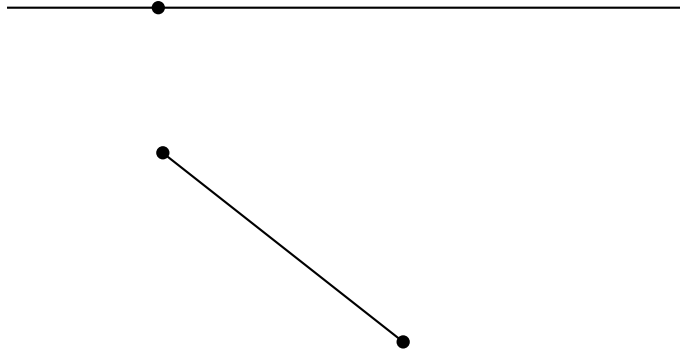
Students work in groups of 4 or 5. They have to use the ruler and compass to do some simple constructions. Every construction must be validated by the teacher before the group proceeds to the next construction. At the end of the hour every student hands out a personal paper that will be graded by the teacher.

1. Copy a given length on a line.
2. Bisect a line segment.
3. Construct a perpendicular to a line at a point on the line.
4. Construct a perpendicular to a line from a point not on the line.
5. Construct an angle bisector.
6. Copy an angle.
7. Construct a parallel to a line through a given point (without drawing any perpendicular to the line).
8. Partition a segment into n congruent segments.
9. Divide a segment into a given ratio (for example 3 to 2).

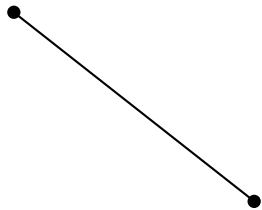
Basic constructions

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Document	Task sheet

Task 1 – Copy a given length on a line.



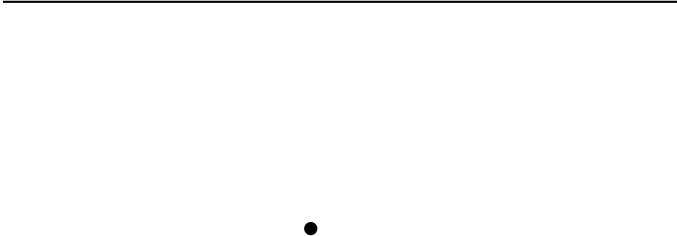
Task 2 – Bisect a line segment.



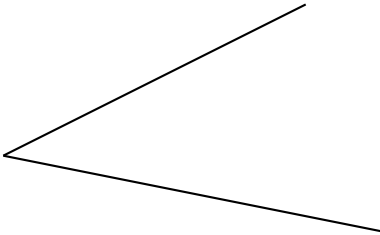
Task 3 – Construct a perpendicular to a line through a point on the line.



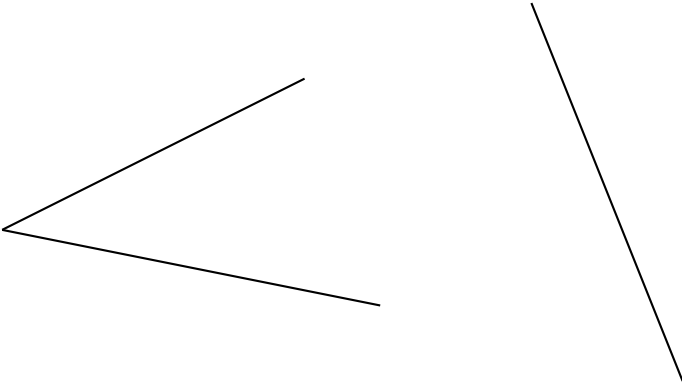
Task 4 – Construct a perpendicular to a line though a point not on the line.



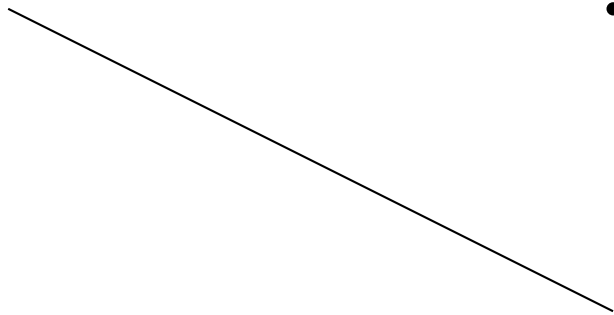
Task 5 – Construct an angular bisector.



Task 6 – Copy an angle.



Task 7 – Construct a parallel to a line through a given point.



Task 8 – Partition a segment into n congruent segments.



Task 9 – Divide a segment into a given ratio (for example 3 to 2).

