

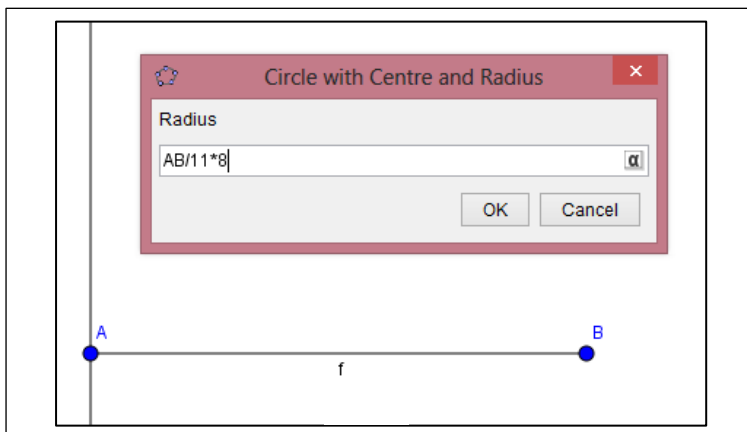


Workshop GeoGebra: Flags and Car Logos

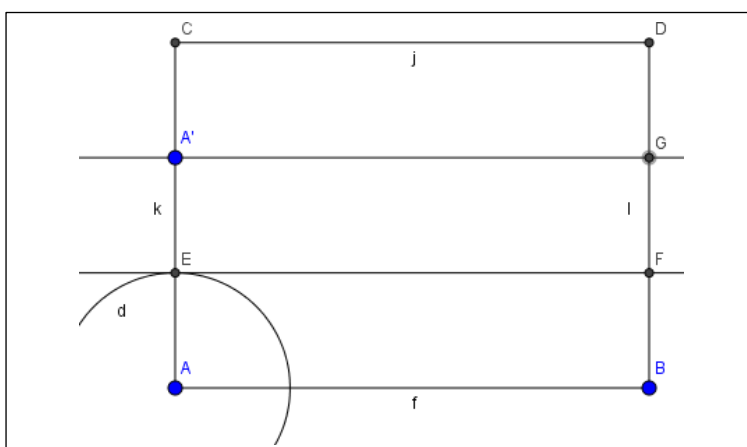
Flags are easy to construct. We will do the construction dynamically. That means that the construction can be done with only one segment (its length is not important) and all other constructions depend on it. If you move one point of the original segment the whole construction will follow. All proportions remain!

This is the flag of Estonia. The ratio of length and height is 11: 8. The three stripes divide the flag into three equal parts.

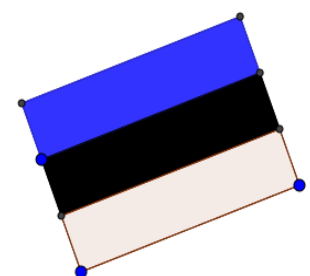
We will show how you can construct this flag dynamically.



1. Construct a segment AB.
2. Construct a perpendicular line in point A.
3. Construct a circle with centre and radius. The radius is $\frac{8}{11}$ of the length of the segment AB.
4. Intersect circle and perpendicular line to get point C.
5. Construct a line in C parallel to AB and intersect it with a line in B perpendicular to segment AB to get point D.
6. Hide all lines, construct segments that form a rectangle.
7. Construct a circle with centre and radius $AC/3$.
8. Construct a line parallel to AB through point E and intersect to get F.
9. Construct the upper parallel line by reflecting point A in point E.
10. Delete parallel lines after finding the intersection points F, G. Draw segments.



11. To colour the fields you have make three different polygons. By right mouse click -> *object properties* you can chose the right colour (take 100%).
12. With right mouse click and marking round the whole construction you can hide all labels.
13. Dragging on the basic point A and B you can verify that the construction is stable and dynamic.

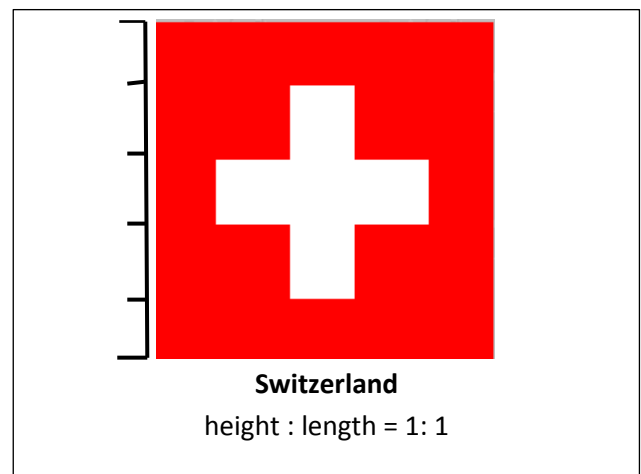
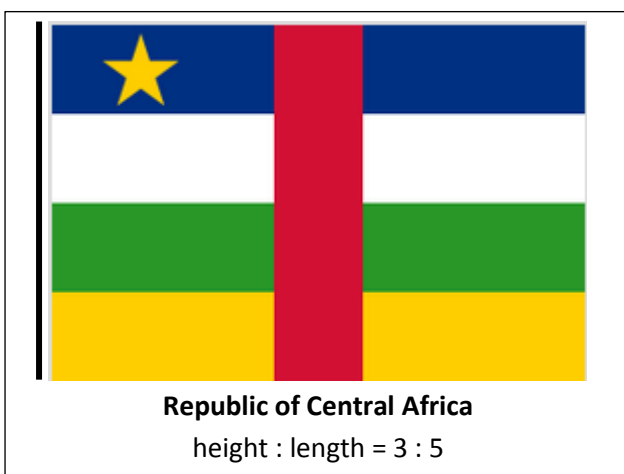
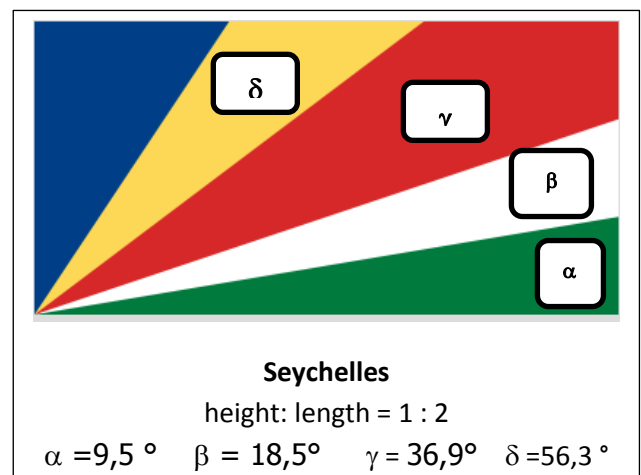
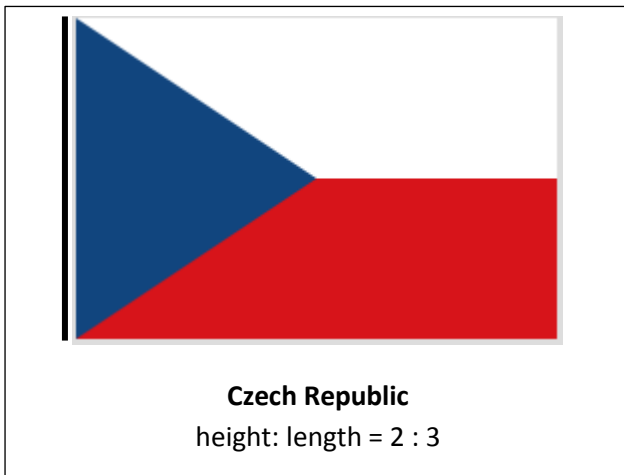
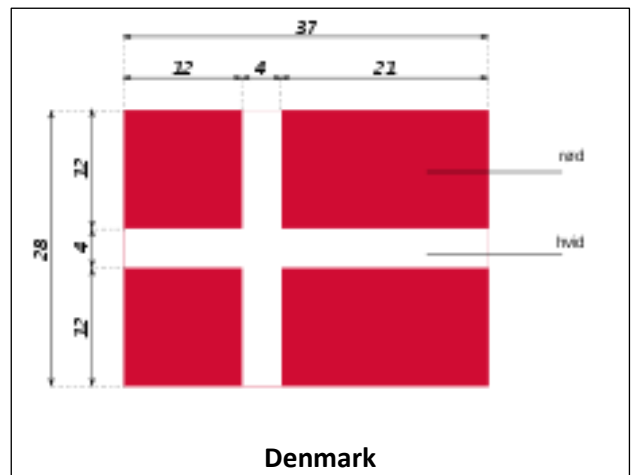
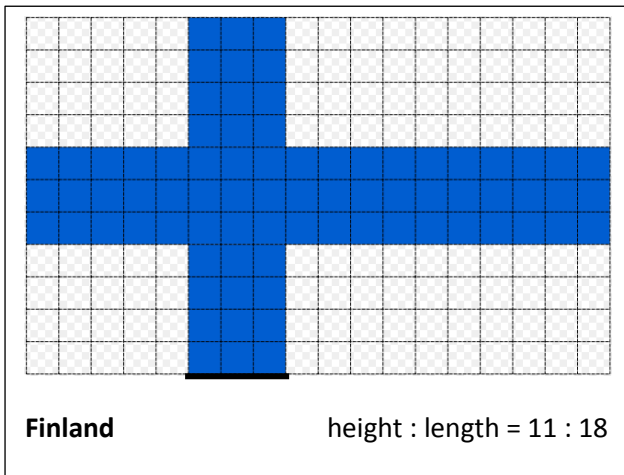




Workshop GeoGebra: Flags and Car Logos

Task: Construct one of the following flags.

Don't use the coordinate system and construct with parallel and perpendicular lines. Some flags can (should) be constructed **dynamically**. The segments that are marked black are the basic ones and may help you to construct it (Finland, Czech Republic, Switzerland, Latvia). You may also choose another flag.





Workshop GeoGebra: Flags and Car Logos

Task: Construct one or two of the logos from well-known car companies! Those which are marked with a red point can be constructed dynamically.

