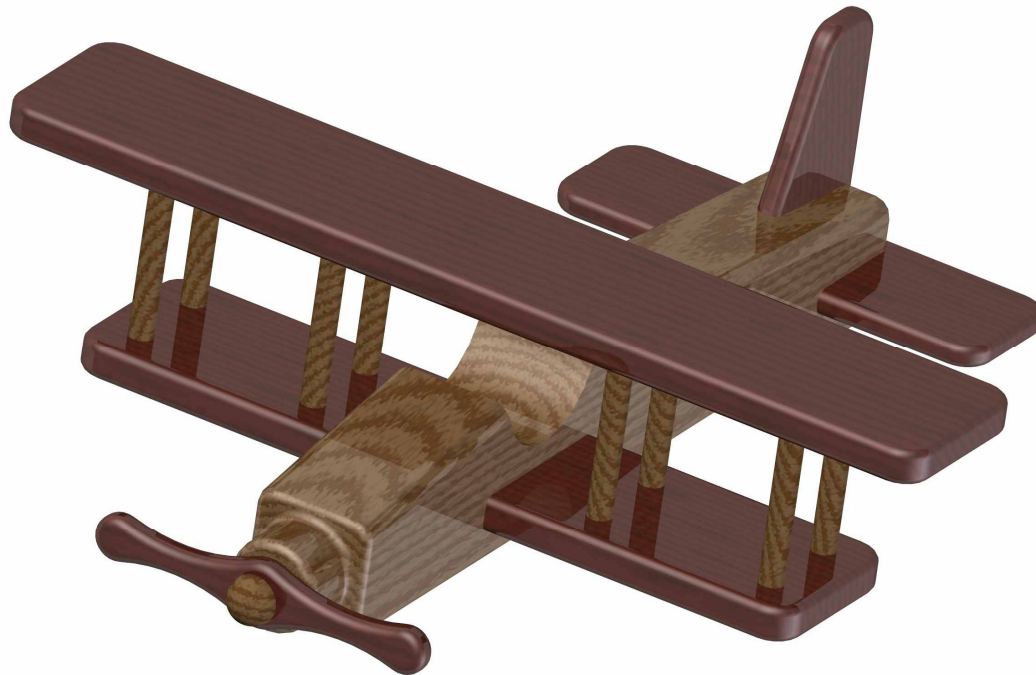


## Biplane kids toy plan

Biplane construction toy is dedicated to children over 3 years of age. In this period of life their imagination is always active, they like to act and play roles of various professions. Nicely designed airplane with rotating propeller will fire up your boy's imagination about flying and pilotage. It will let him to have a good time, but also make him learn something about traffic and vehicles, also to develop his imagination and spend his energy while running around simulating plane flight and at the same time building his muscles.



Biplane model from the beginning of 20th century will look much more realistic to your child than some modern models. If your child – as most of the children – likes to collect certain type of toys, this biplane will be a nice addition to its collection of planes.

Biplane toy is being made completely of wood, so that you could give your child a toy which is safe and environmentally friendly. Make sure that you do a perfect final surface treatment of wood, so that you won't risk a wood splinter get into the finger of your child.

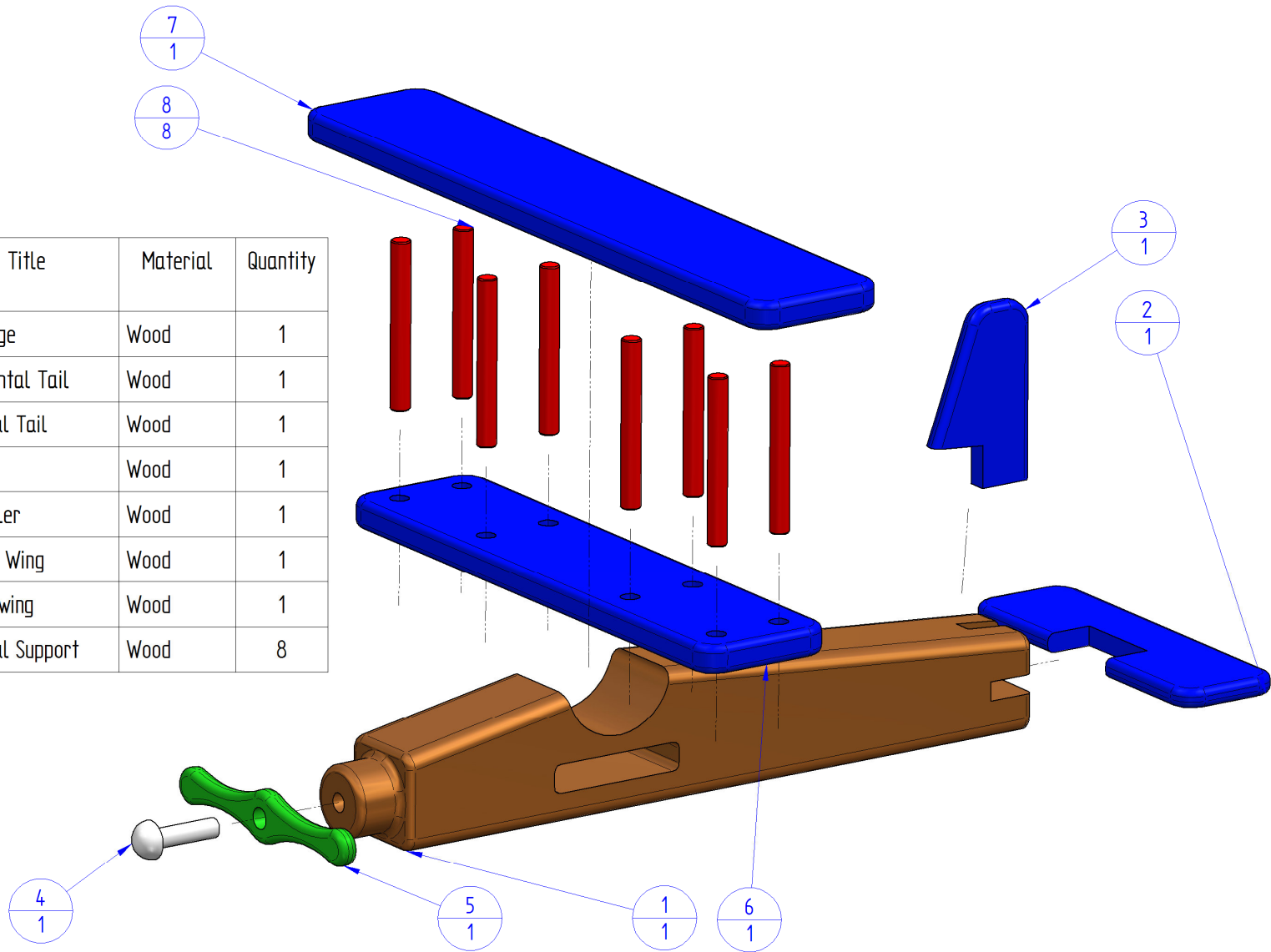
For making wooden biplane construction toy you won't need much material – you can use wood remains that usually can be always found in the workshop. And you won't need many tools. This model is quite simple to make, it won't take much of your time, and you will make a toy that can remain undamaged after many fallings and stay in the family waiting for the next generations of little pilots. As you can see in the plan, we recommend not to paint wood, but leave it in its natural colour. It is enough to protect it with some kids-safe natural oils (for example linseed or walnut oil) and you will make a perfect toy in just a few hours. Use different types of wood, so you would get the right wood colour of plane fuselage and wings.

Carefully make the parts of the biplane by the measurements given on particular pictures. The measurements are given in millimeters, while the measurements given in inches are in brakes (1 inch = 25,4 mm).

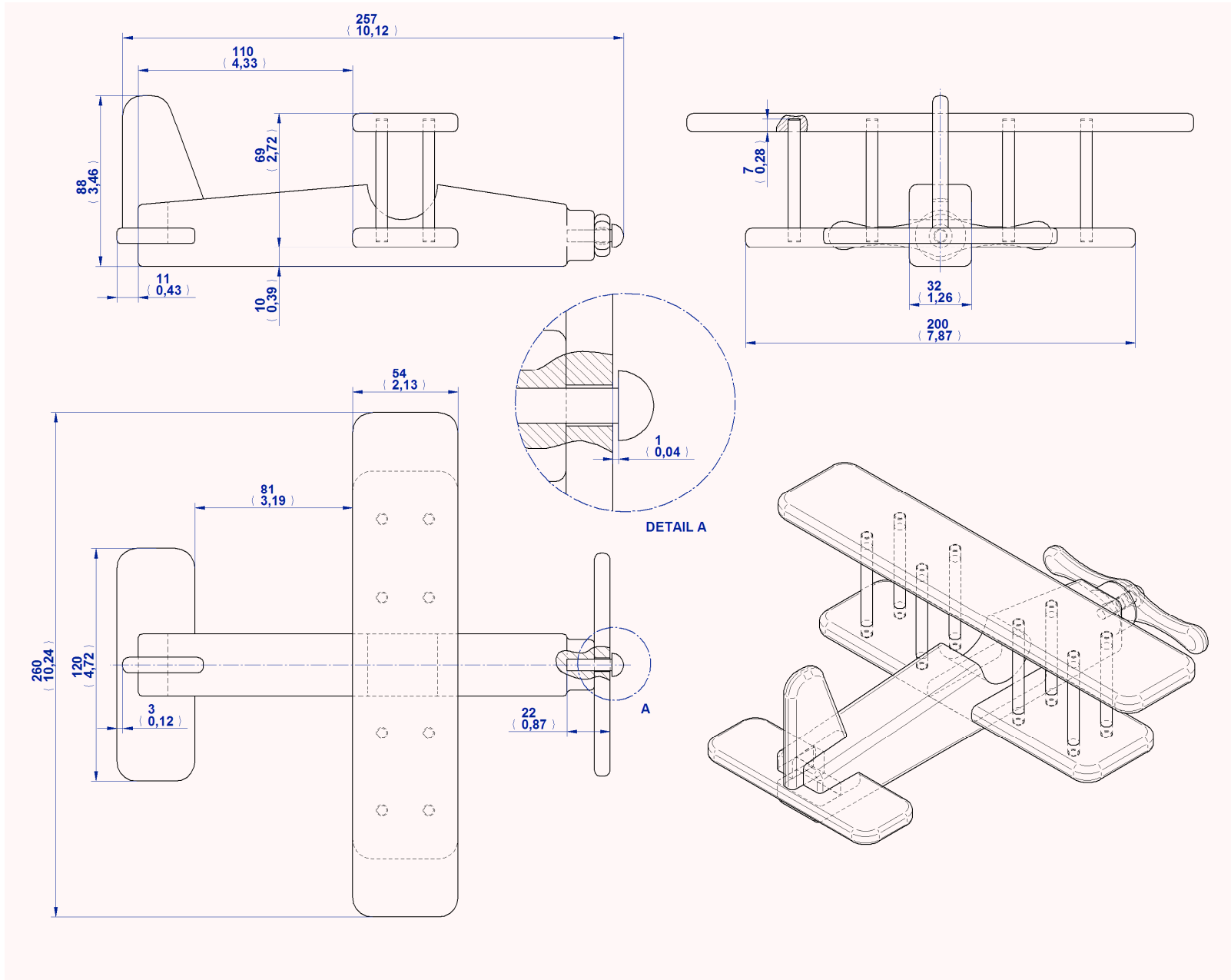
After making all the parts of the plane, you should join them with glue. Be careful with dosage of glue, because it could come out from the holes and smear the surface of an object.

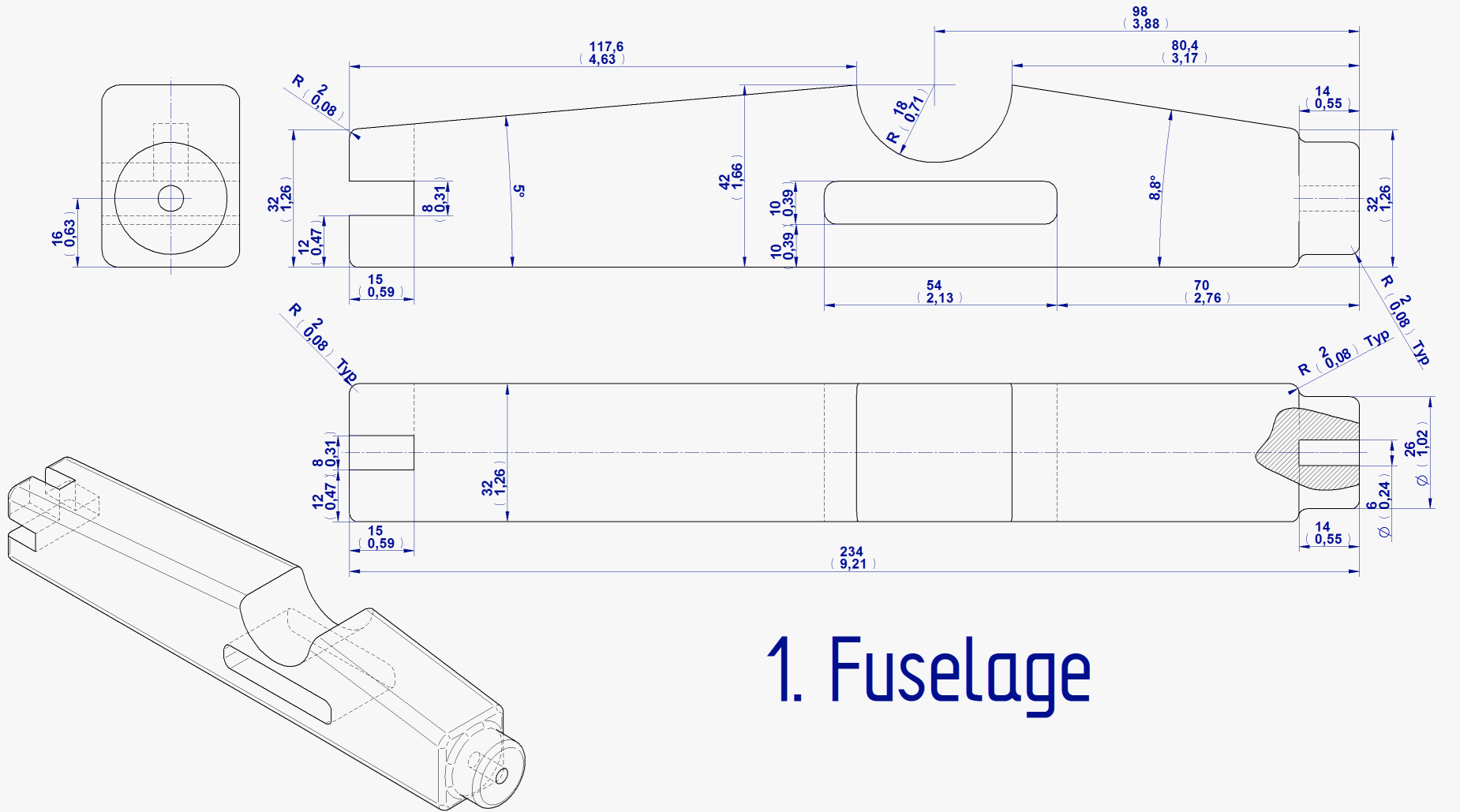
# PARTS LIST

Item Number	Title	Material	Quantity
1	Fuselage	Wood	1
2	Horizontal Tail	Wood	1
3	Vertical Tail	Wood	1
4	Axle	Wood	1
5	Propeller	Wood	1
6	Lower Wing	Wood	1
7	Upper wing	Wood	1
8	Vertical Support	Wood	8

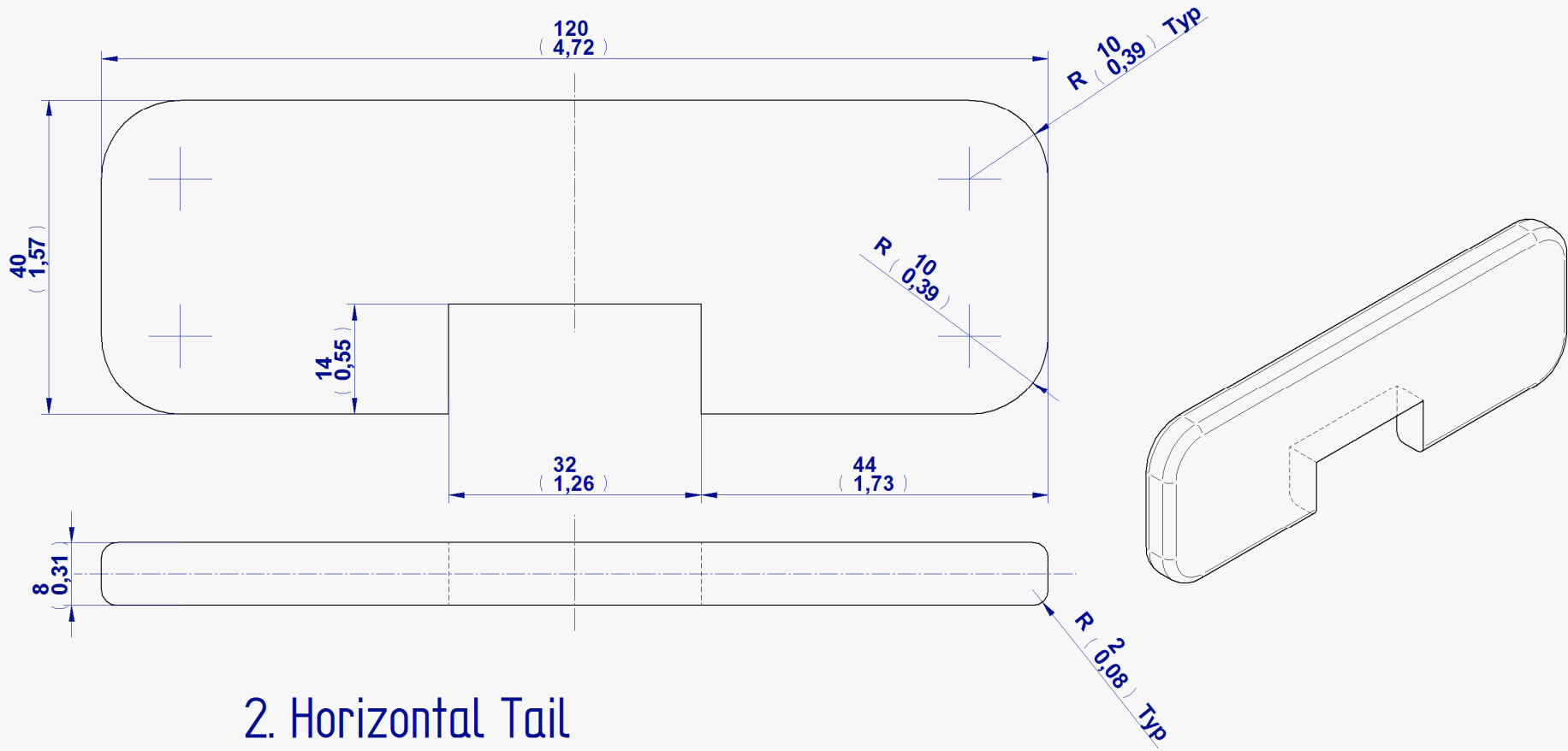


# 2D Documentation

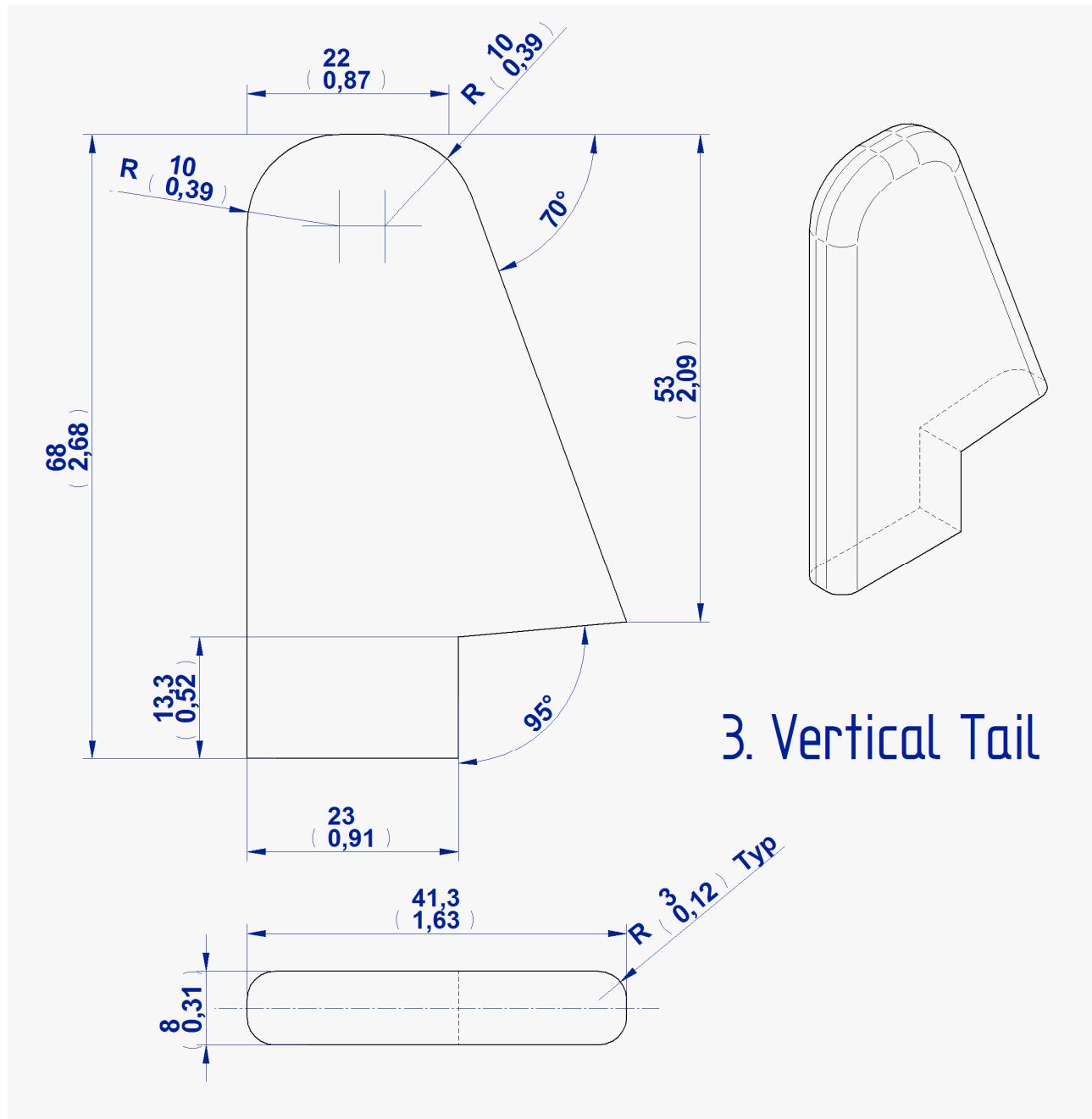




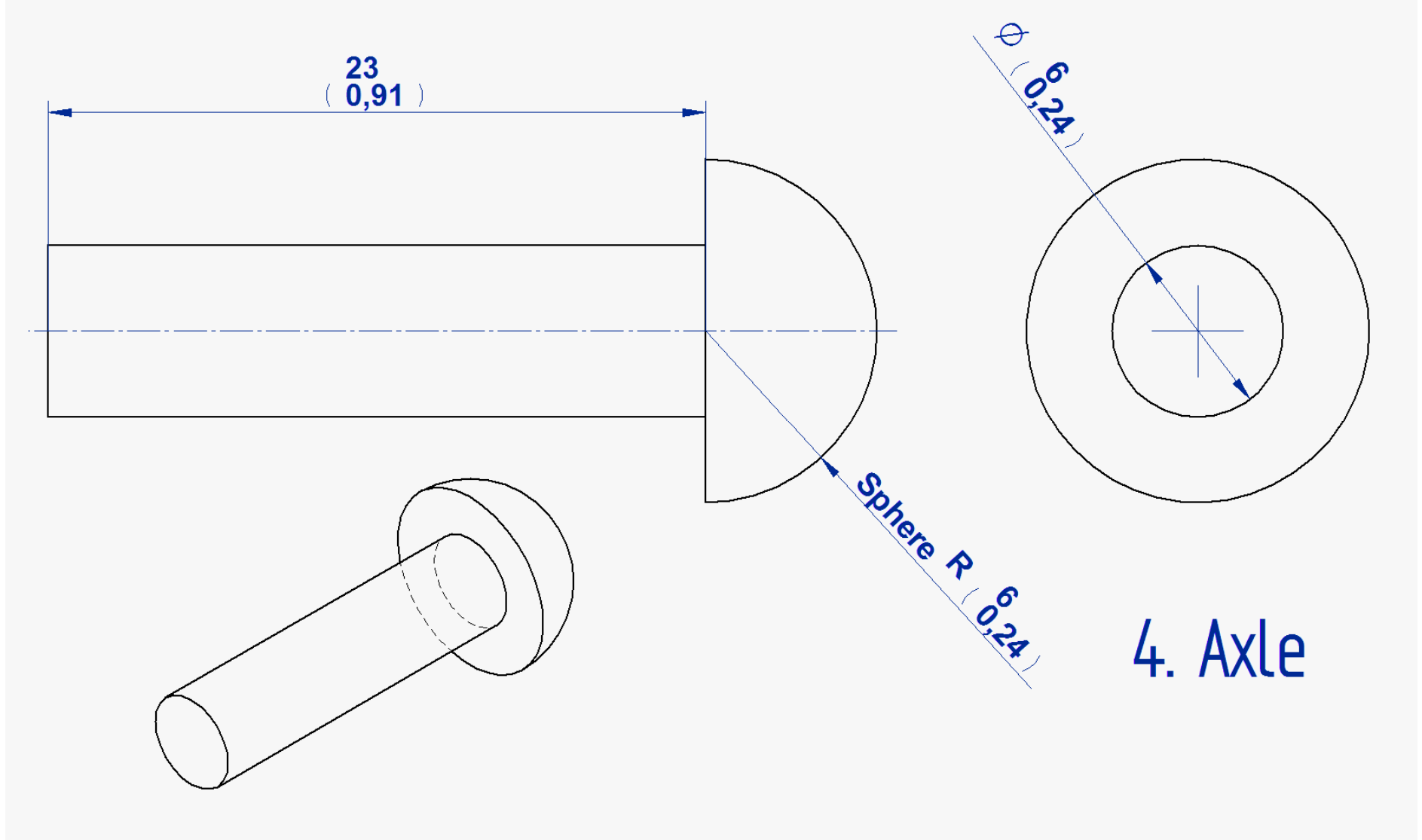
# 1. Fuselage



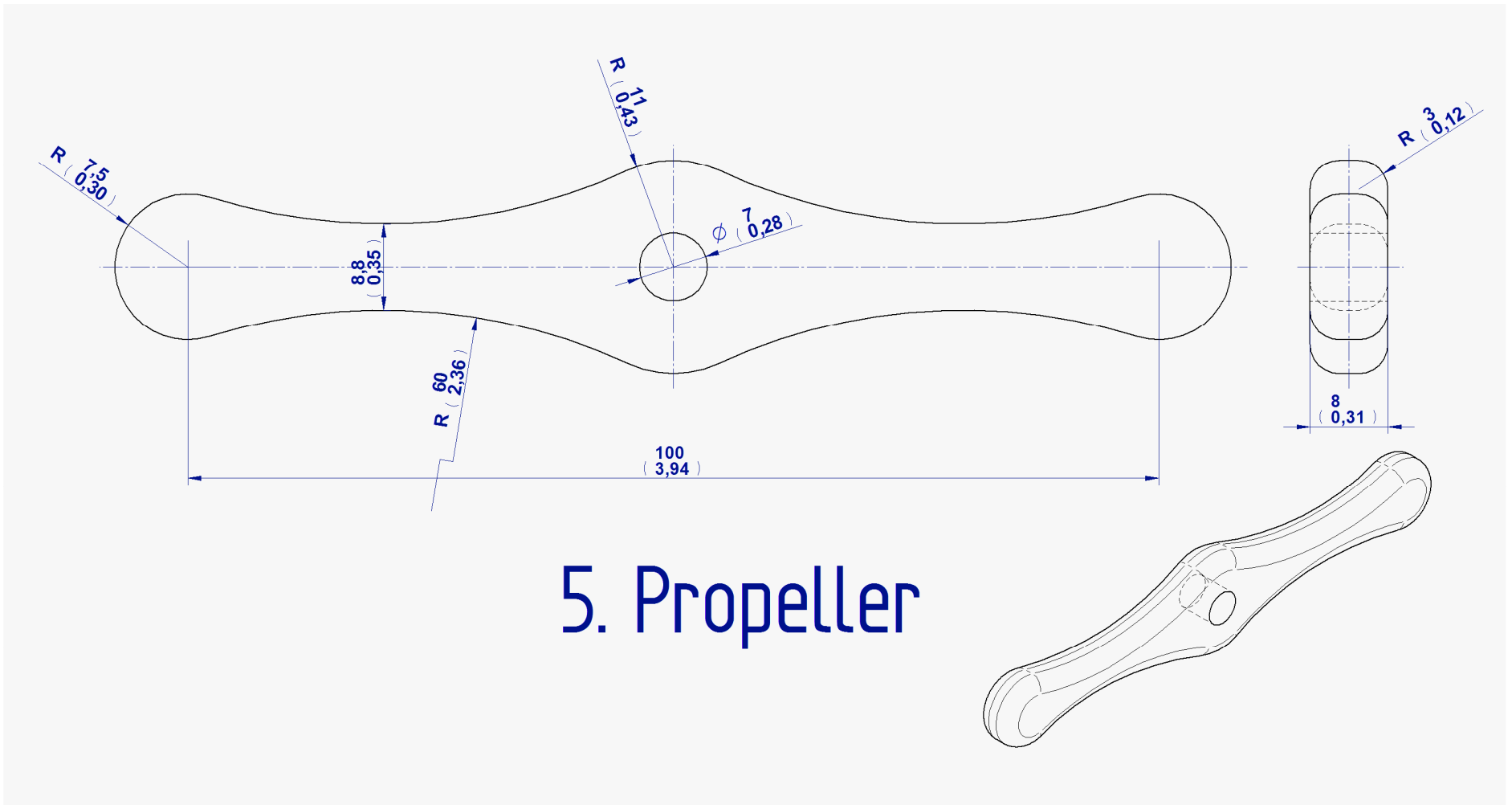
## 2. Horizontal Tail



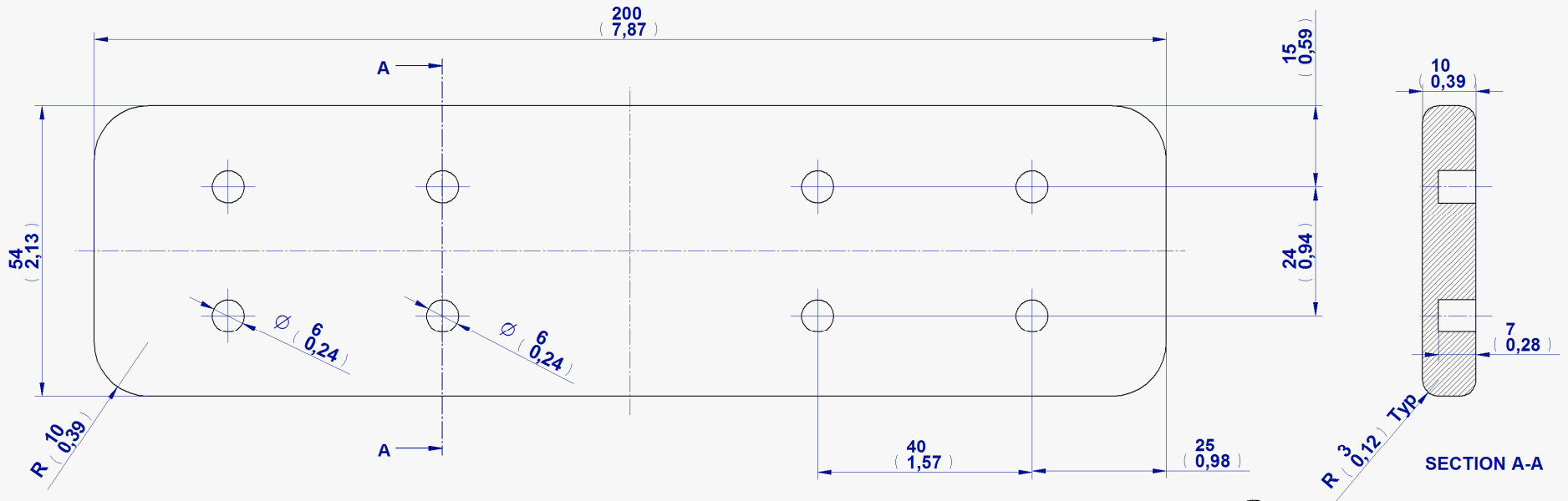
### 3. Vertical Tail



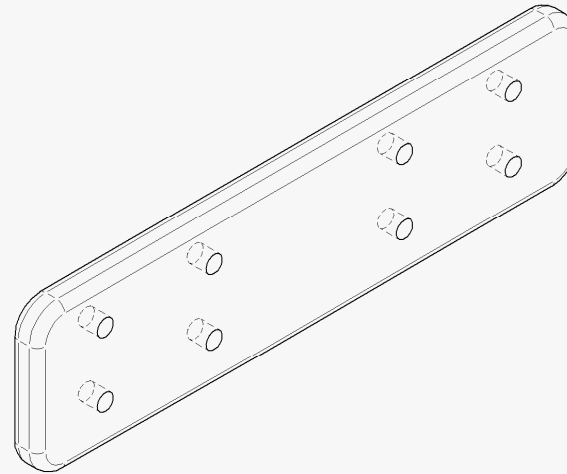


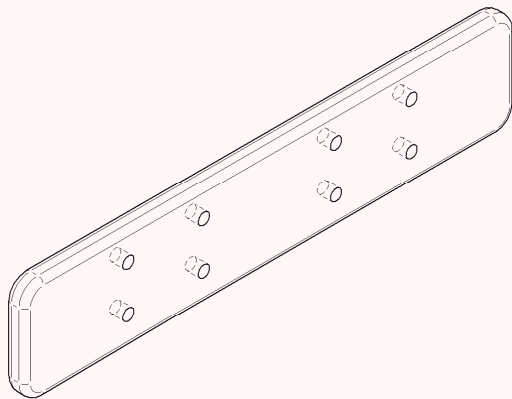
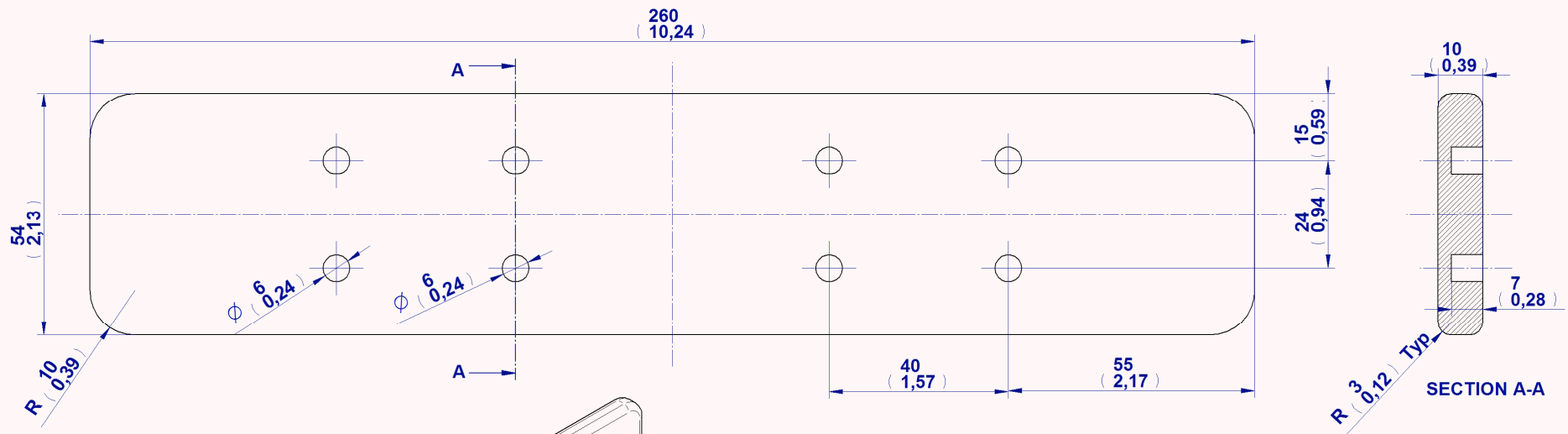


# 5. Propeller



## 6. Lower Wing



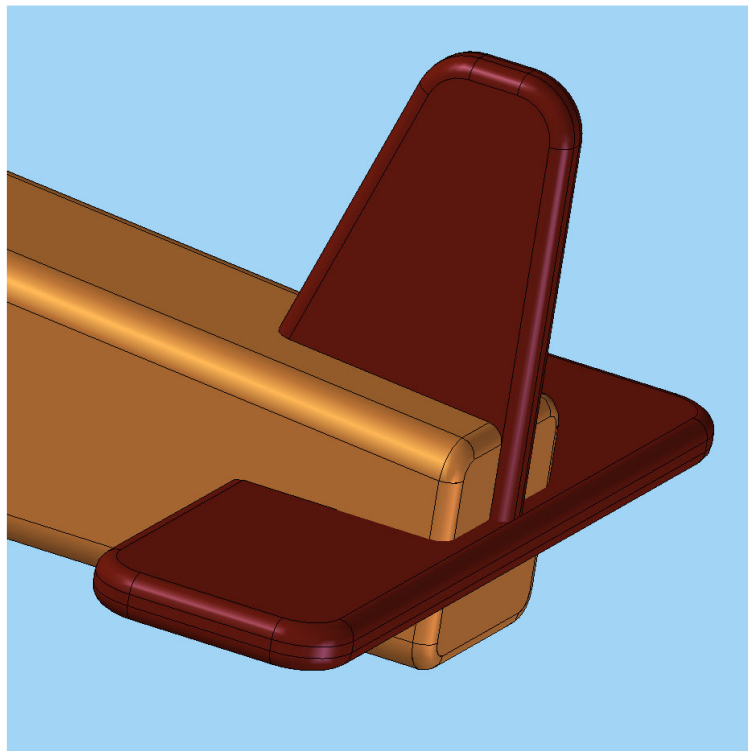
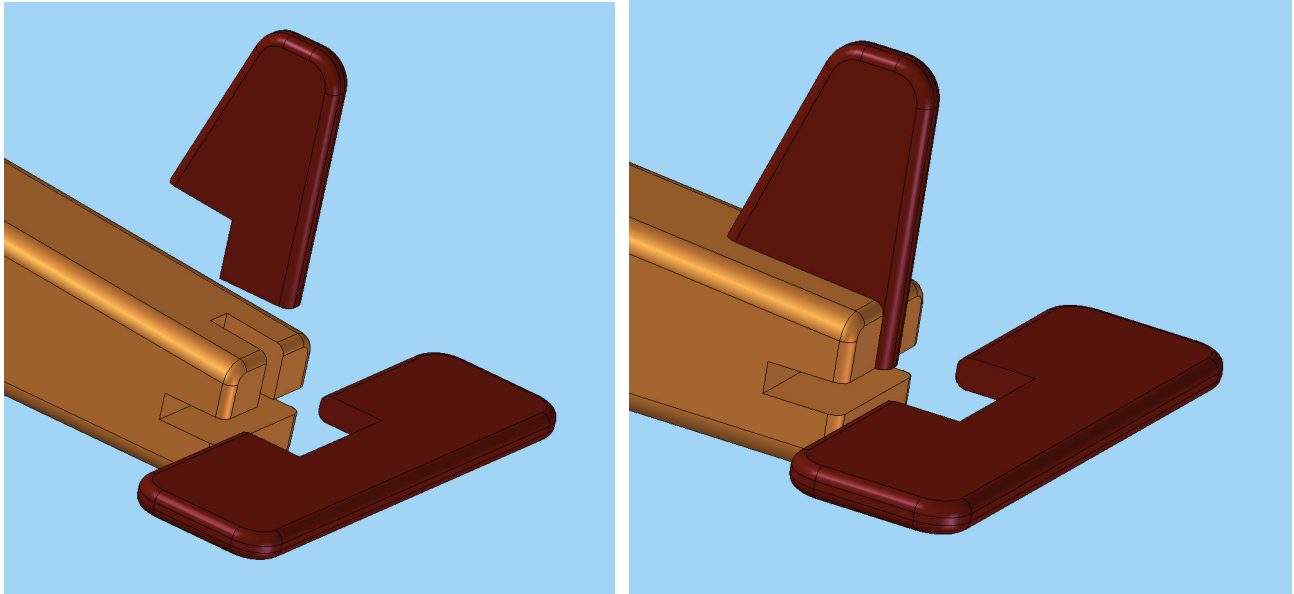


## 7. Upper Wing

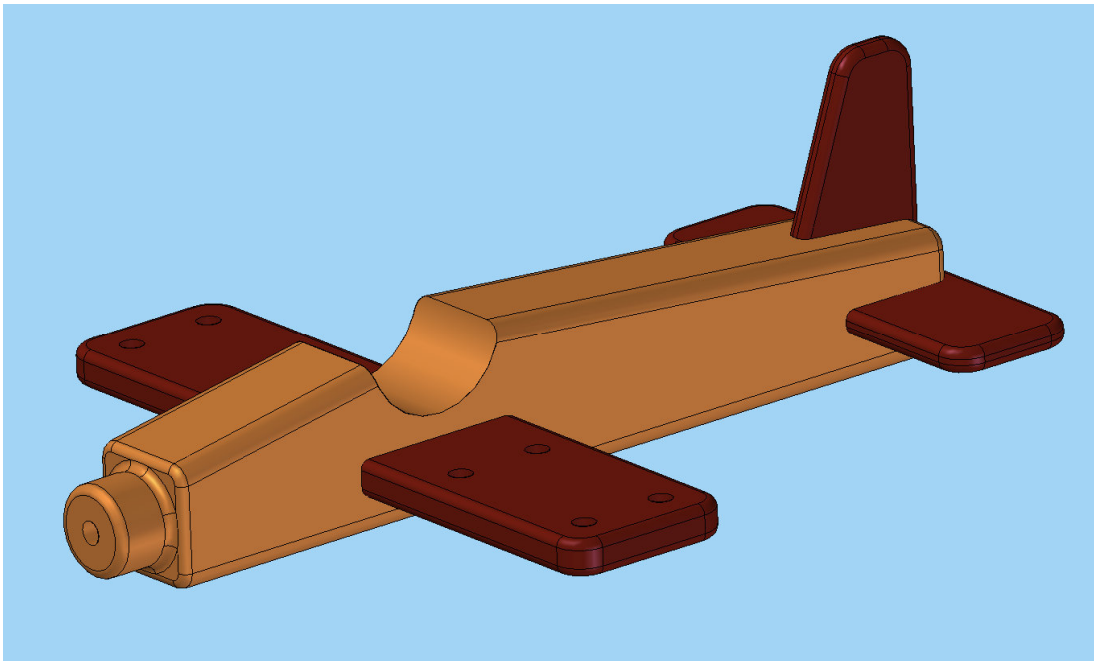
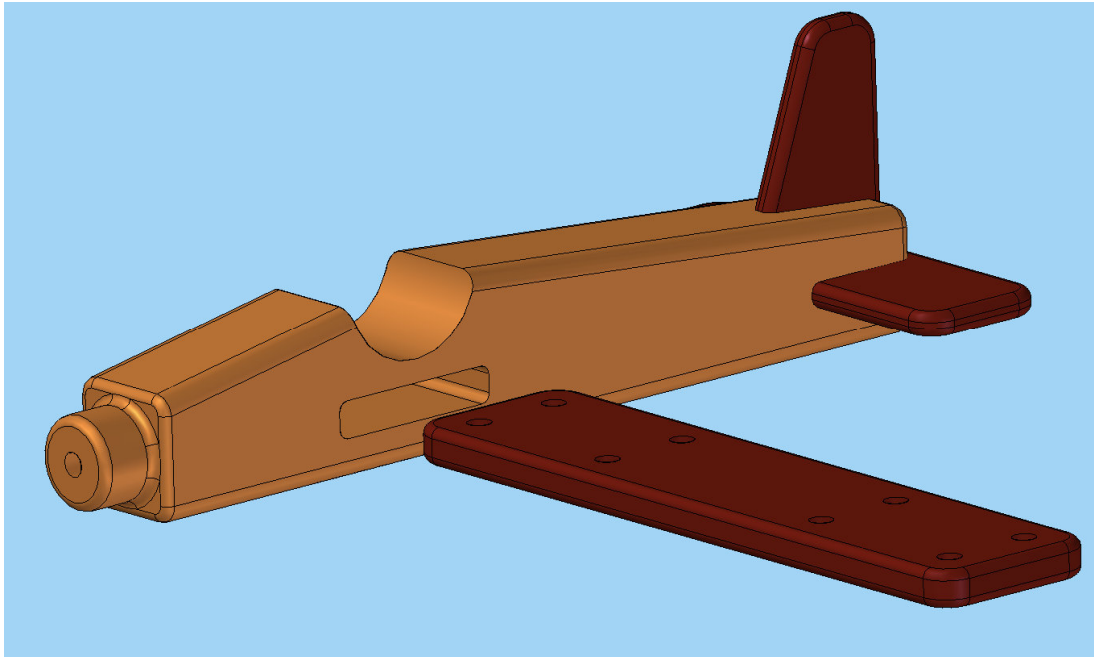


# ASSEMBLAGE INSTRUCTIONS

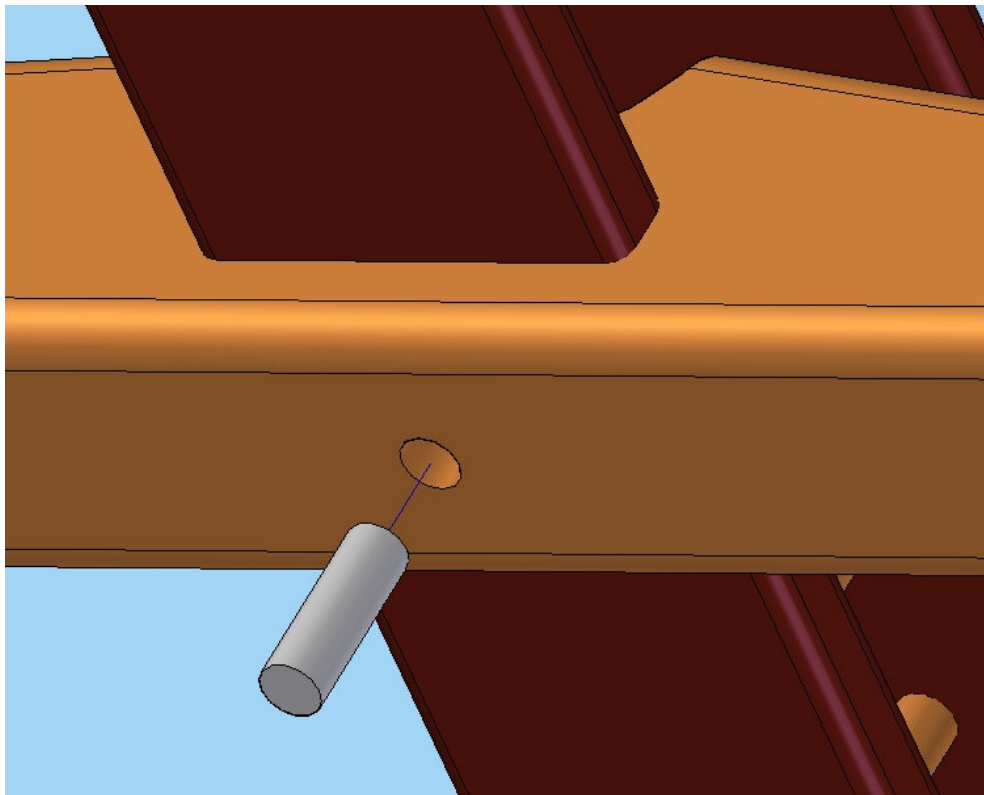
1. Horizontal tail (Item 2) and Vertical tail (Item 3) attach with glue to the Fuselage (Item 1) and leave it to dry out.



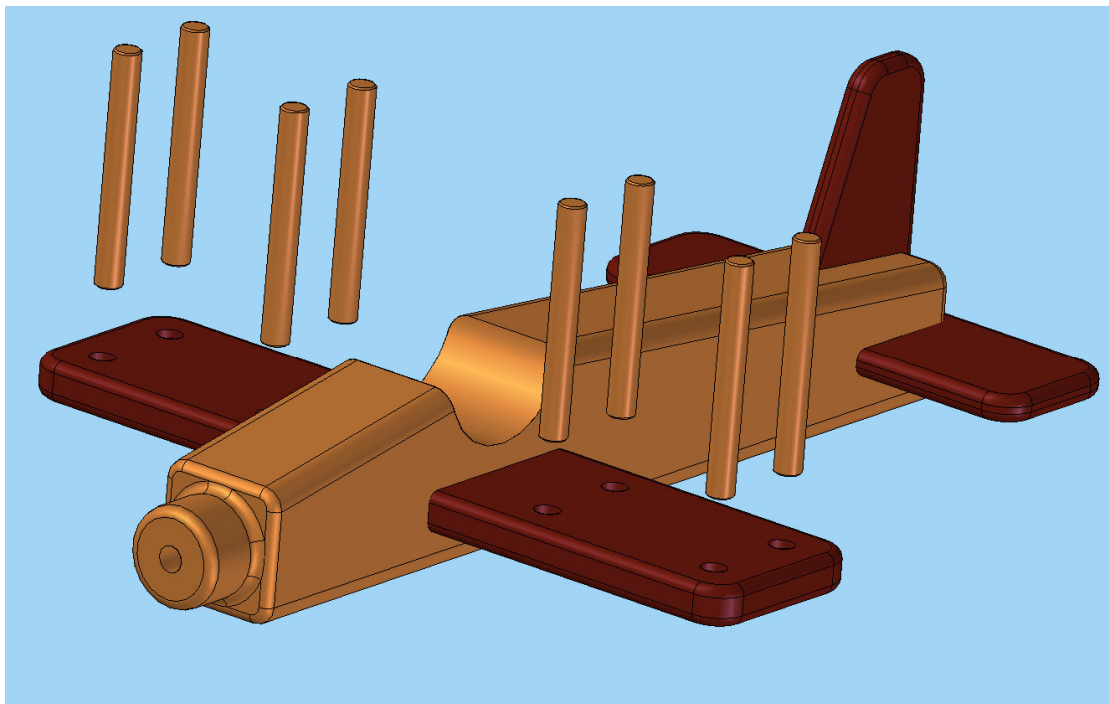
2. Spread the glue through the middle of Lower wing (Item 6) and push it slowly into the hole on the lower side of a Fuselage (Item 1). Be sure to have some clean cloth, to wipe off the glue if it come out to surface.

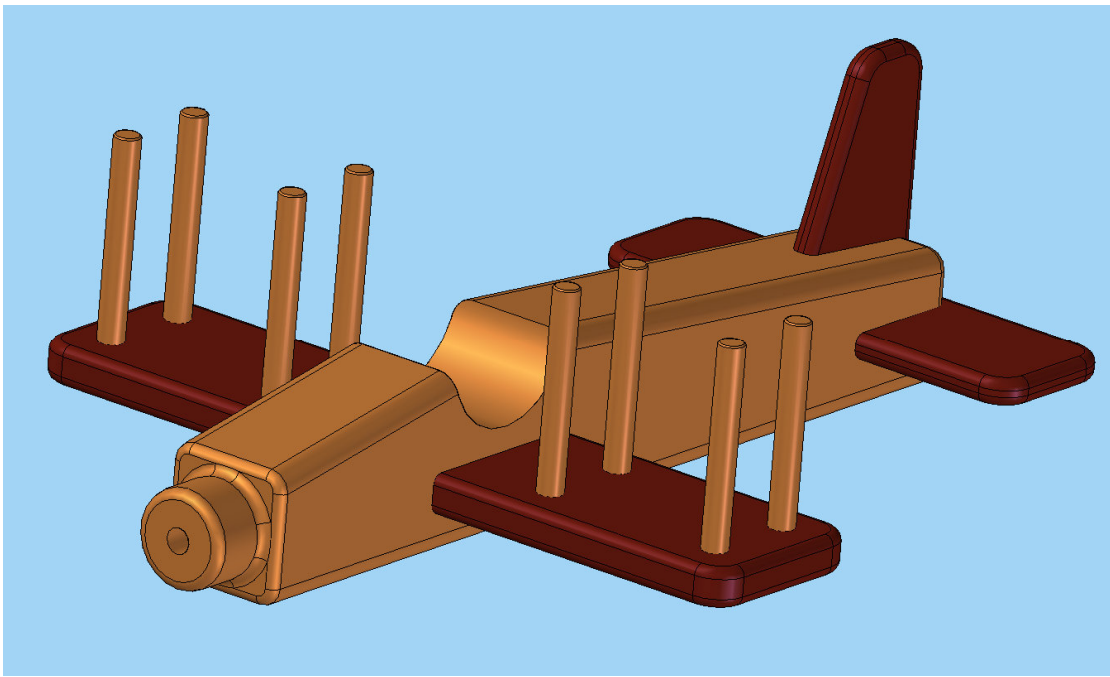


If you think that the wing is not well firmed to the Fuselage, you should drill a hole (25 mm depth; D8mm diameter) and put the pin with the same dimensions (Length 25 mm, Diameter D8mm) into it. Previously bedaub the pin with glue.

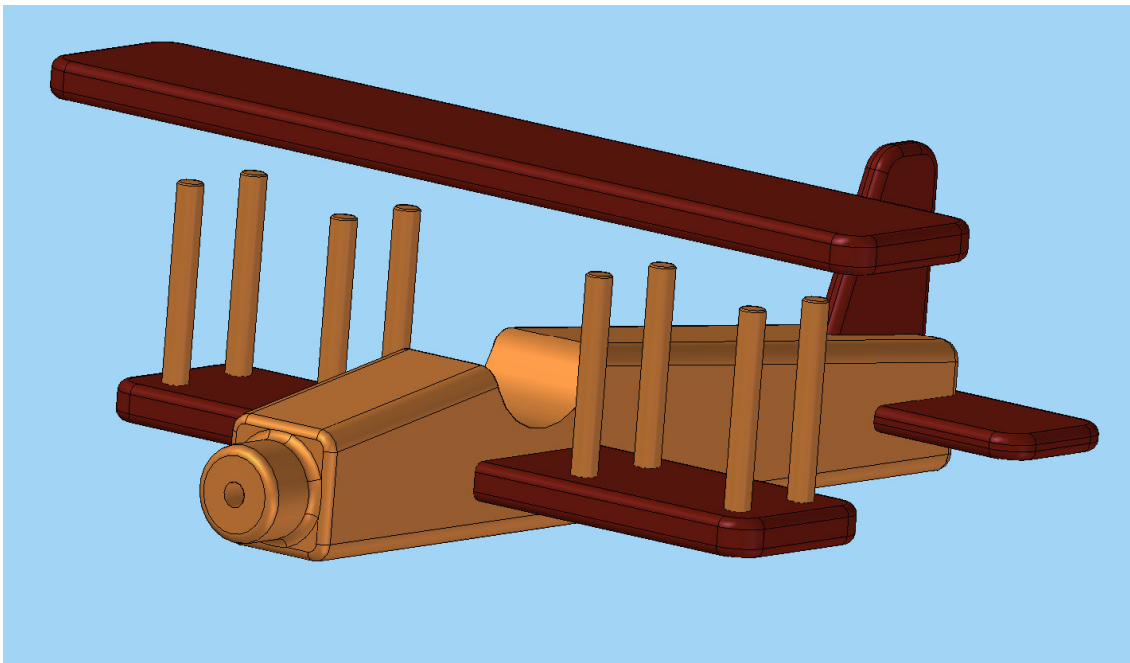


3. Put the glue into the holes on the upper surface of Lower wing (Item 6), then stick the Vertical support (Item 8) into it.

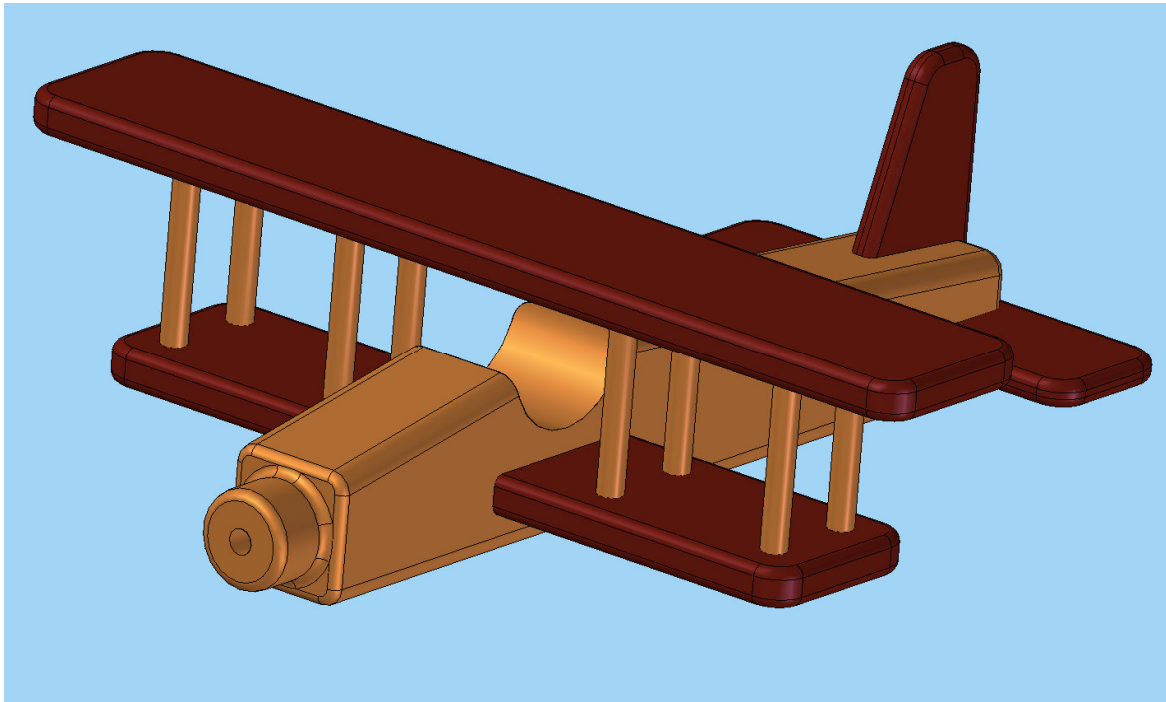




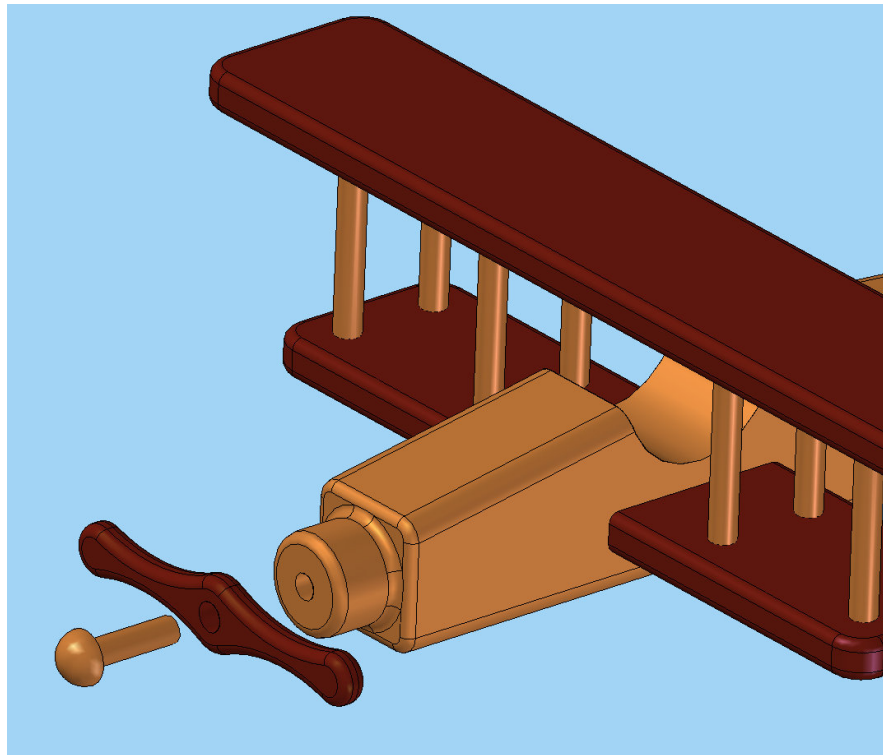
4. Also put the glue into the holes on the lower side of the Upper wing (Item 7) and stick the Vertical support (Items 8) into it.

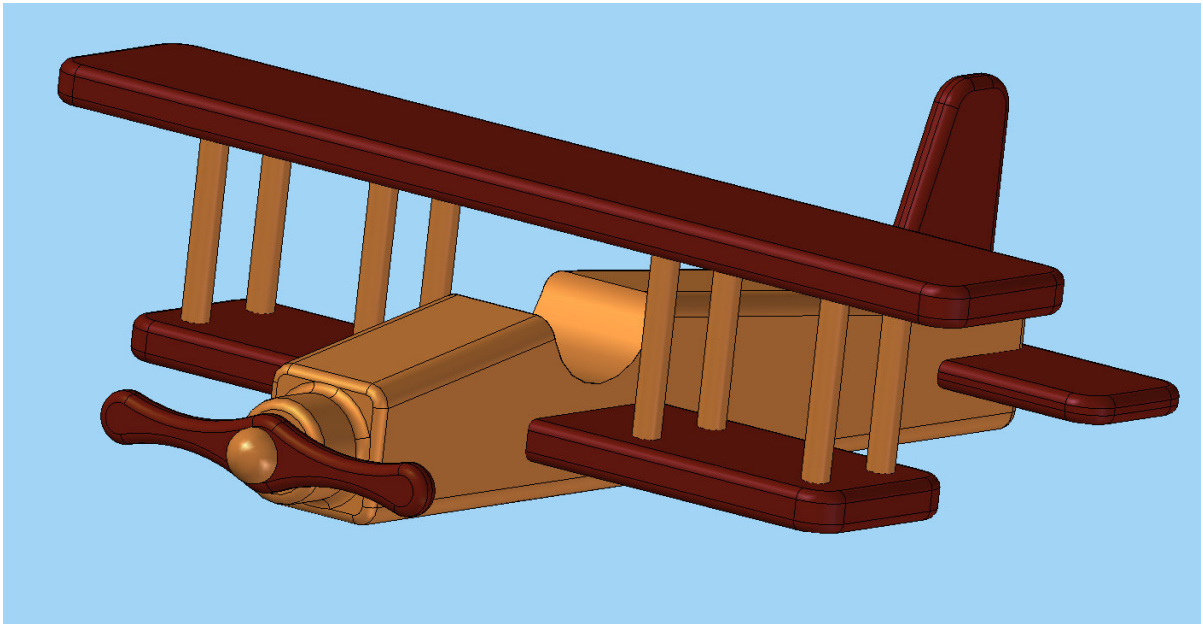






5. Pull the Axle (Item 4) through the Propeller (Item 5), and if the Propeller is spinning with difficulty, widen the hole on the Propeller with a rasp.





If you have performed the previous step properly, all that is left is to attach the Axle (Item 4) and Propeller (Item5) with glue to the Fuselage (Item 1). Pull the Axle (Item 4) through a hole on the Propeller (Item5) and attach with glue onto front hole on the Fuselage (Item 1) (previously put some glue into the hole). Be careful, not to put any glue on the Propeller (Item5), because it should spin freely.