# Air Ship "Leonardo"

The myth of Leonardo da Vinci as the genius that, in the second half of the 15th century, had already anticipated many discoveries of modern times, has been disproved long ago. He simply recorded in many of his works the so far unwritten ideas of his time and of older traditions all the way to antiquity. What is left is the fascination with the sheer amount and diversity of the compiled material and the many experiments he conducted. To the latter belong his prestudies on the principles of flight with paper airplanes and small hot air balloons made of paper.

A similar myth, also unfounded, is the one about the first manned balloon flight with a hot air balloon of the Montgolfier brothers in 1783. The first provable aeronaut and designer of an "aeronautic machine" was the portuguese Father Bartolomeu Lourençe de Gusmão. In 1709, he floated with his balloon build of paper to the roof of the palace, before the eyes of the entire royal court.
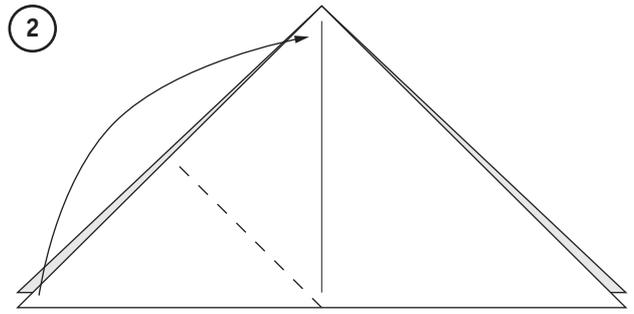
Experiments with balloons were not unusual around 1700. So it is quite possible that undiscovered documents on manned balloon ascents are still slumbering somewhere.
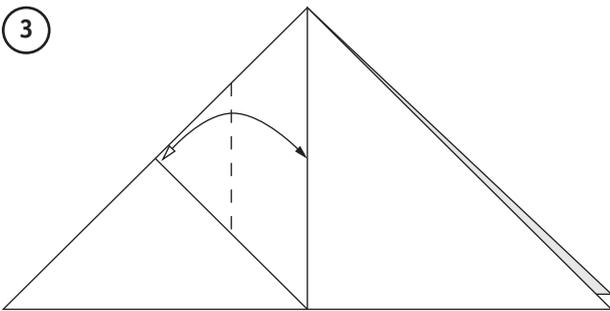
Hints

- level: ■ ■ ■ □
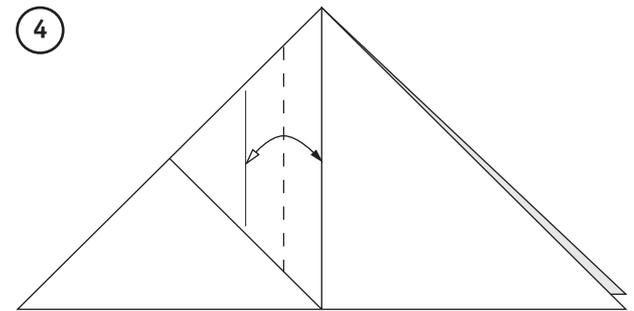- paper: 24x24 cm or greater for success

1
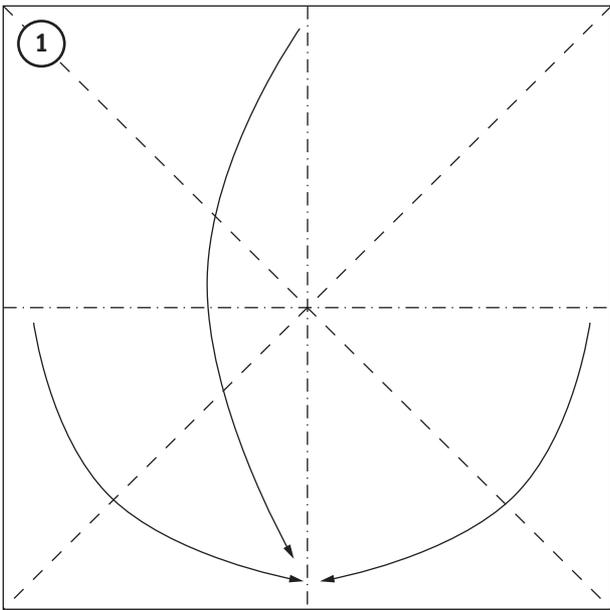
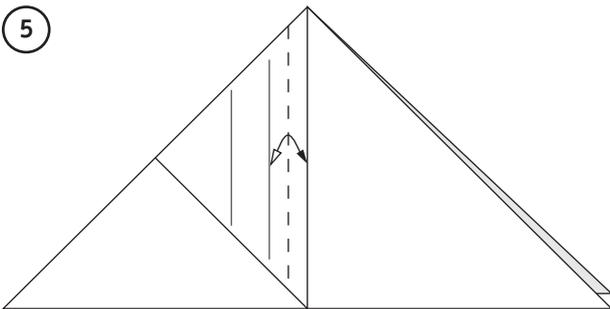- colored side down
- collapse to a waterbomb base
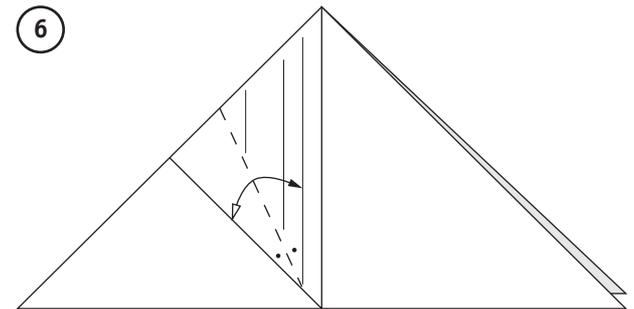
2

fold the upper left to the top
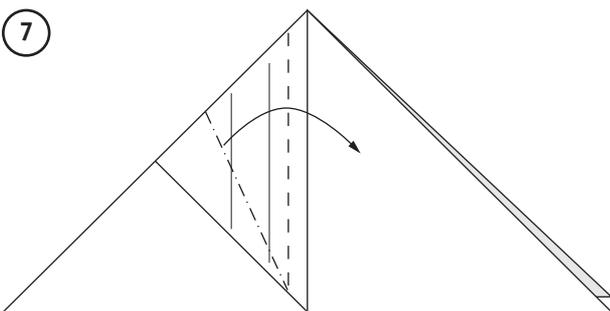
3

fold and unfold
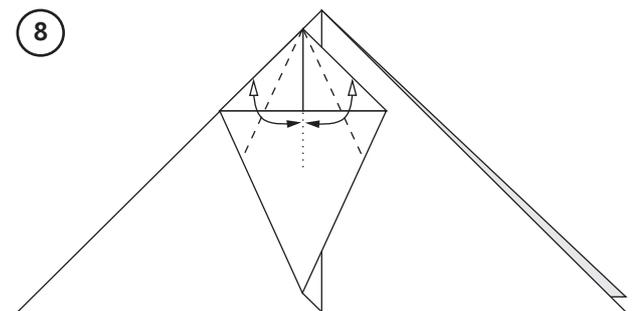
4

fold and unfold

5

fold and unfold
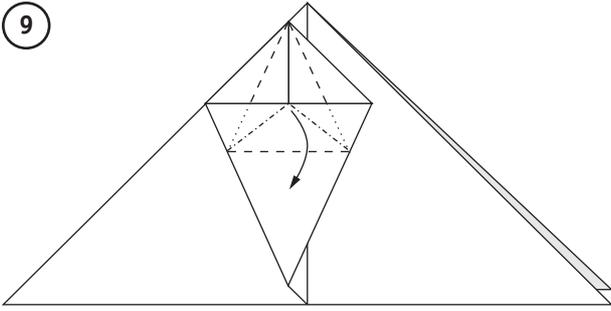
6

fold and unfold

7

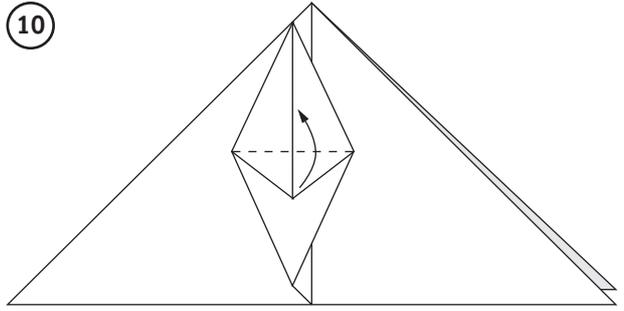squash-fold on the existing creases from steps 5 and 6
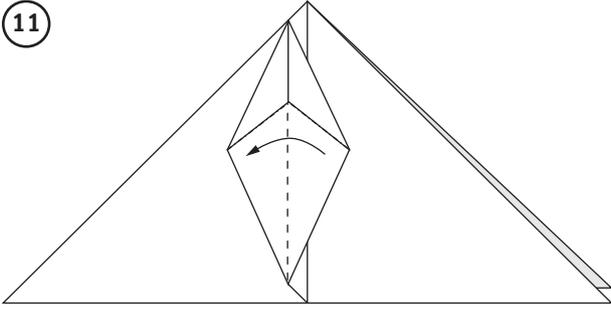
8

fold and unfold
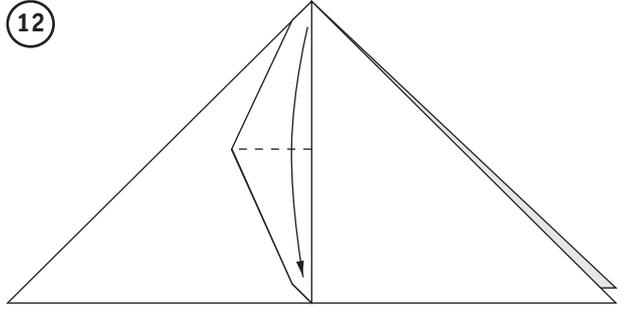
2

9 petal-fold, use creases from step 8

10 valley-fold (note that you folded a half bird base)
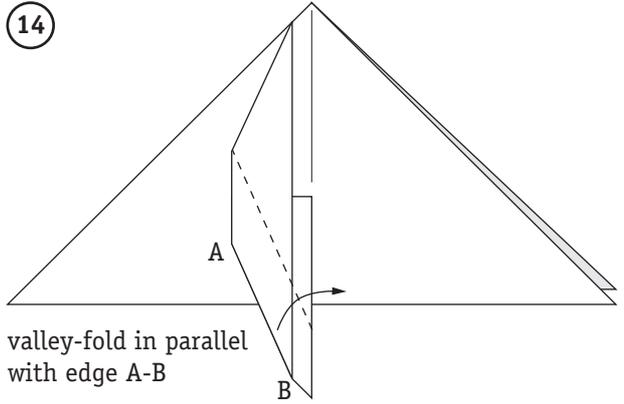
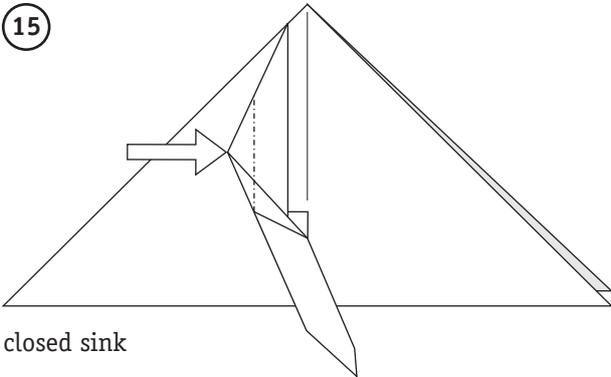**11** valley-fold, close the half bird base

12 fold the tip of the left upper flap down
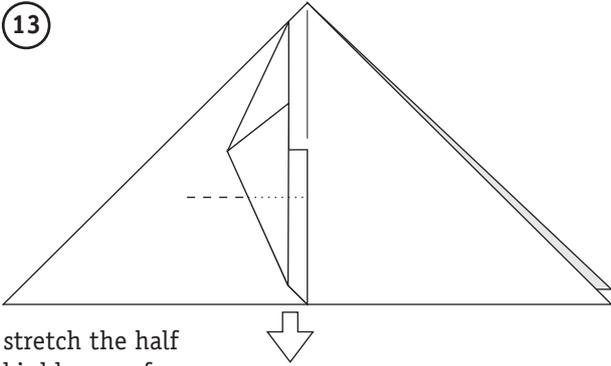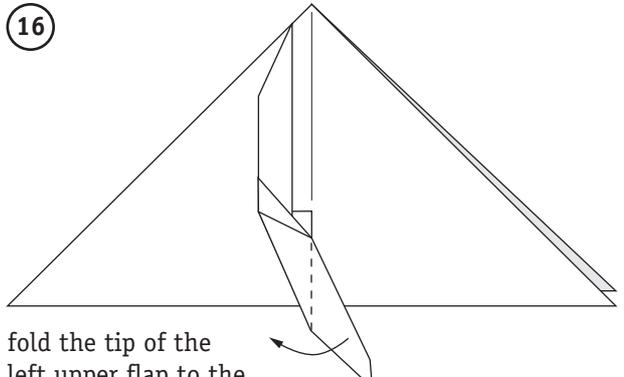
13 stretch the half bird base as far as you can

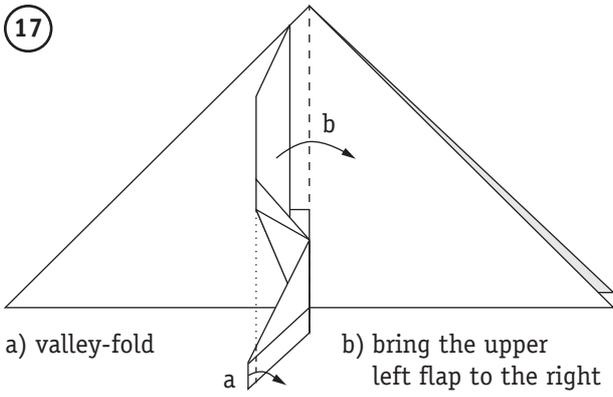**14** valley-fold in parallel with edge A-B
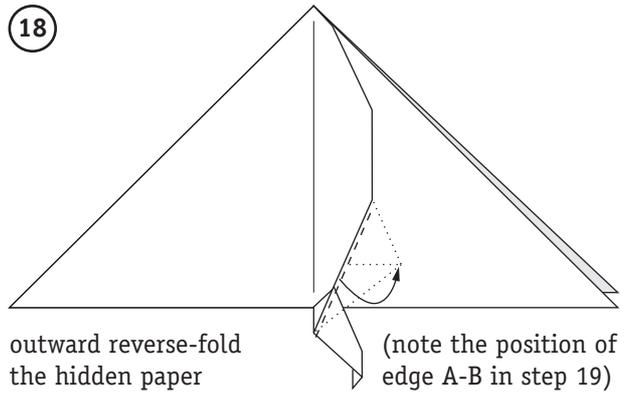
A

B

15 closed sink

16 fold the tip of the left upper flap to the left

3

(17)

a) valley-fold

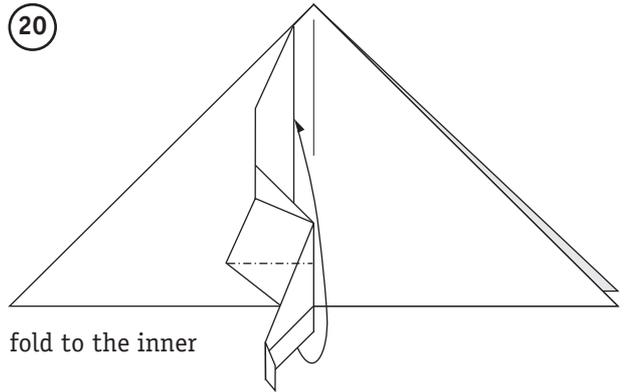b) bring the upper
   left flap to the right

a

b

(18)

outward reverse-fold
the hidden paper

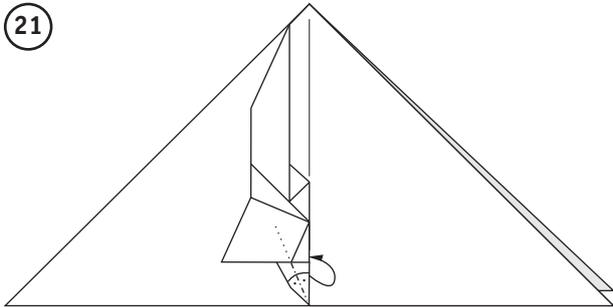(note the position of
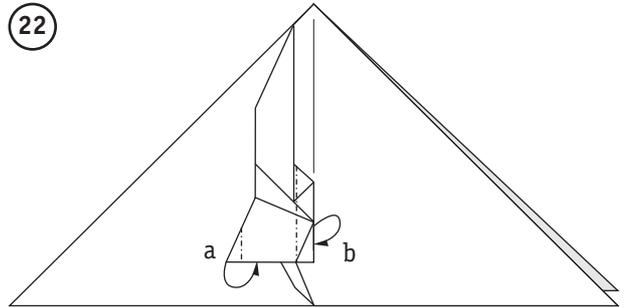edge A-B in step 19)

(19)
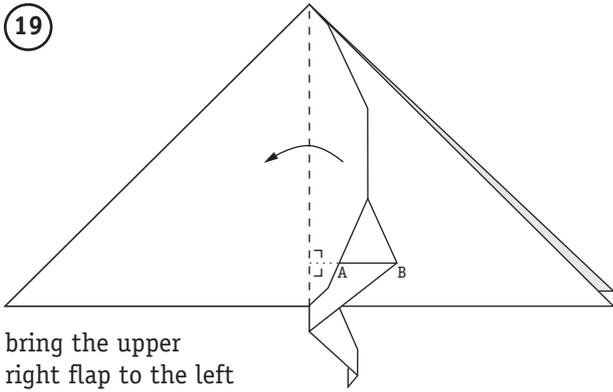
bring the upper
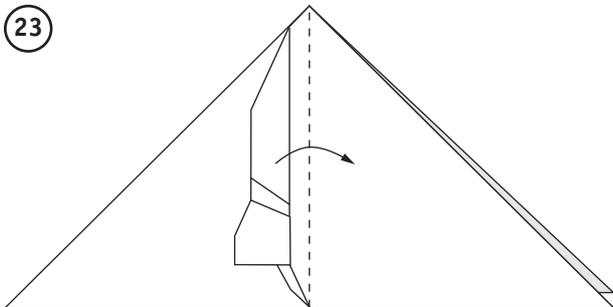right flap to the left

A   B

(20)

fold to the inner
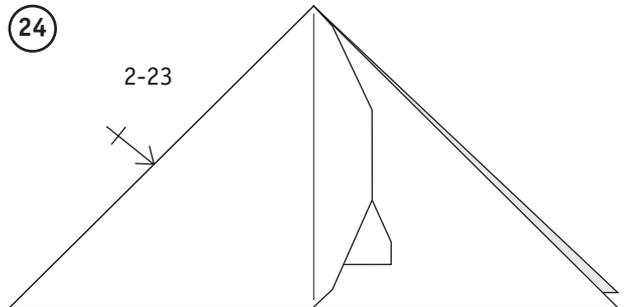
(21)

fold to the inner

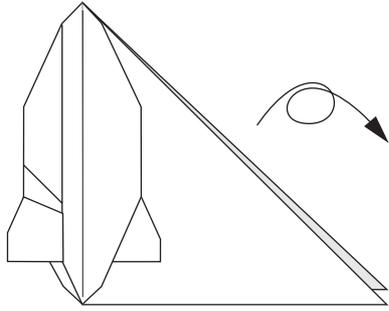(22)

a

b

a) reverse-fold
b) fold into the pocket

(23)

bring the upper
left flap to the right

(24)

2-23

repeat steps 2-23
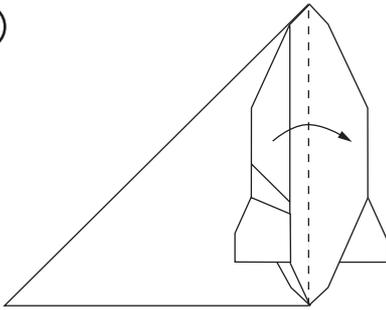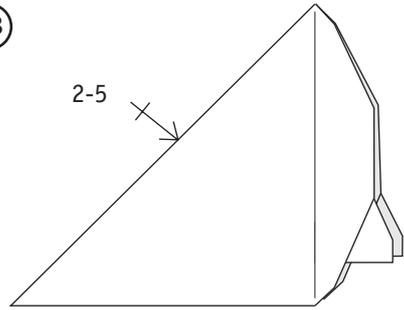on the left flap

4

25

turn over

26

2-23
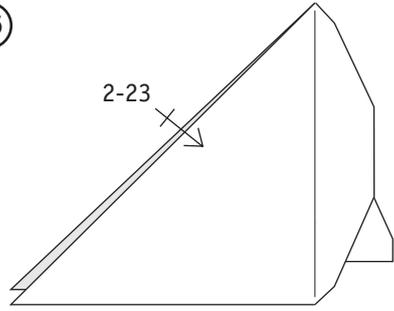
repeat steps 2-23
on the left upper flap

27

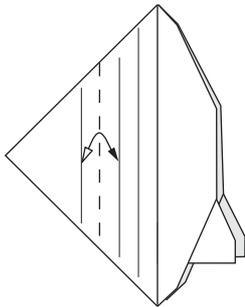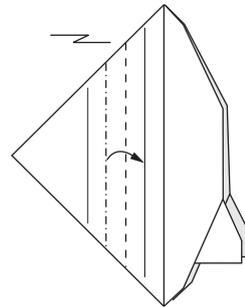bring the left upper flap to the right

28

2-5

repeat steps 2-5
on the left upper flap
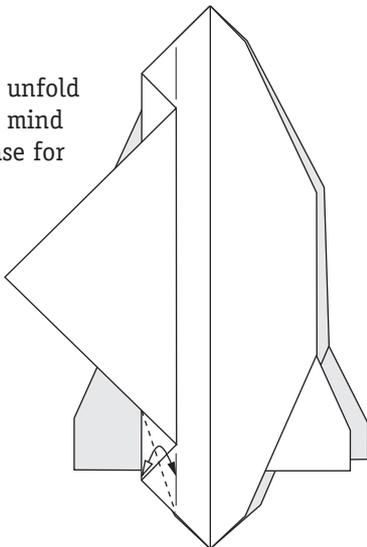
29

fold and unfold

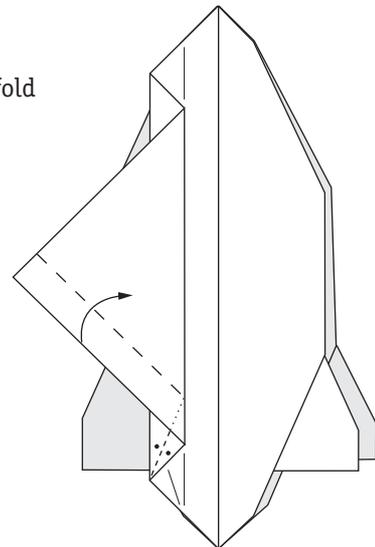**30**

pleat-fold

31

fold and unfold
(keep in mind
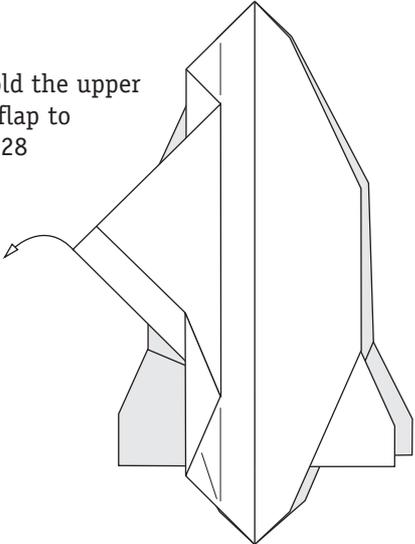this crease for
step 41)

32
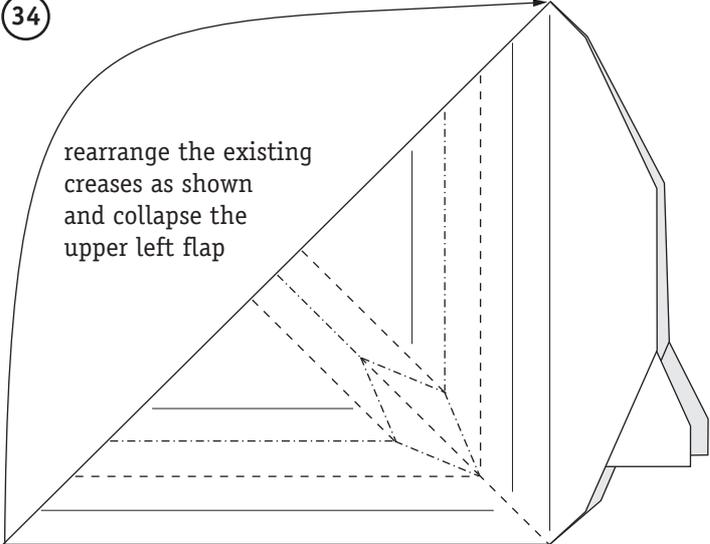
sviwel-fold

5

33

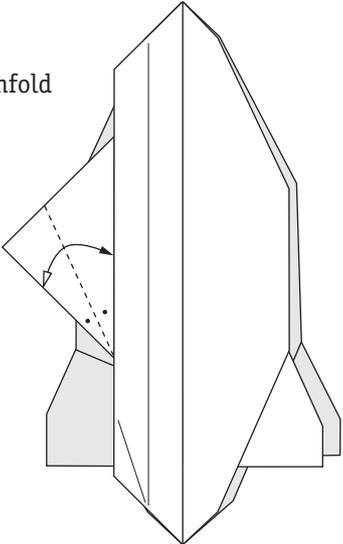unfold the upper
left flap to
step 28

34

rearrange the existing
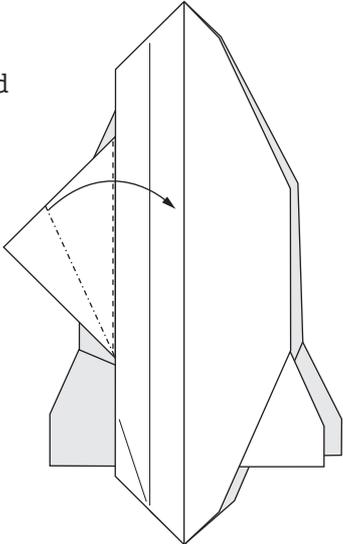creases as shown
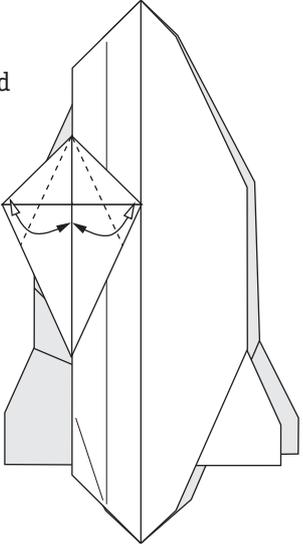and collapse the
upper left flap

35

fold and unfold

36

squash-fold

37

fold and unfold

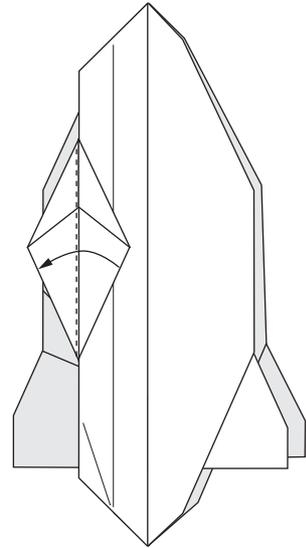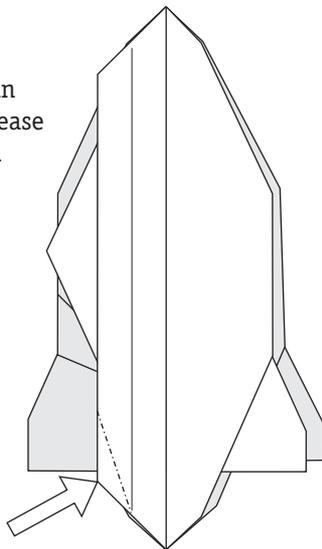**38**

petal-fold
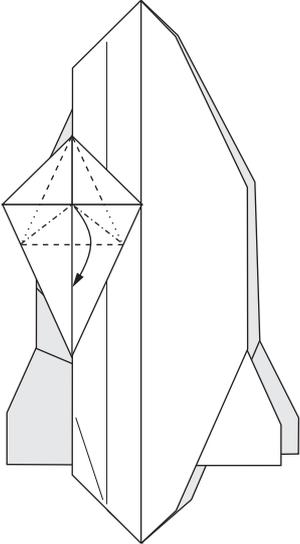
39

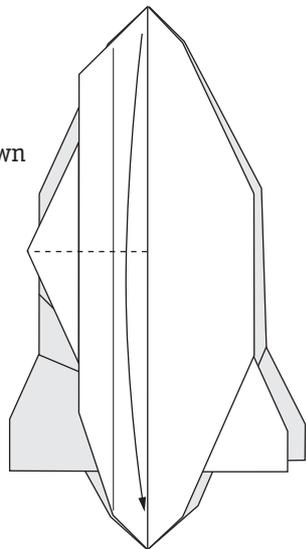valley-fold
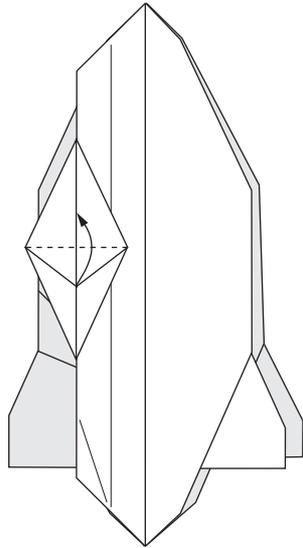
40

close

41

closed sink in
using the crease
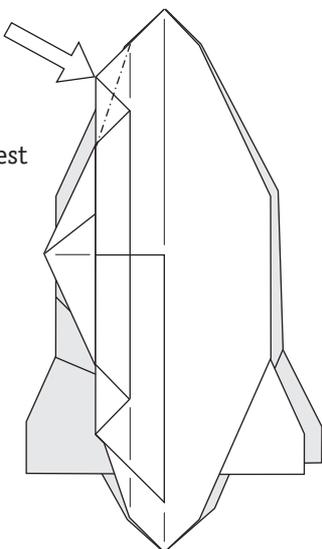from step 31
(this is the
first hardest
step)

42

fold the tip
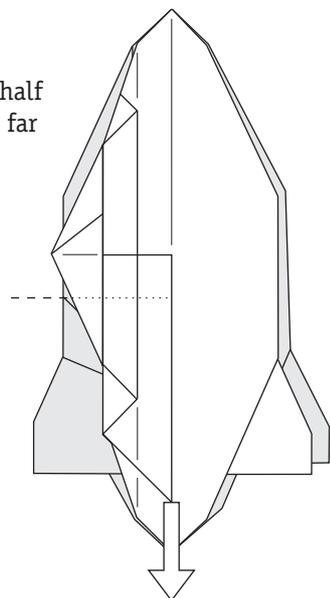of the left
upper flap down

43

closed sink
(this is the
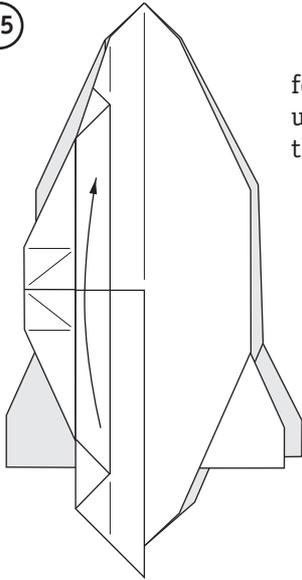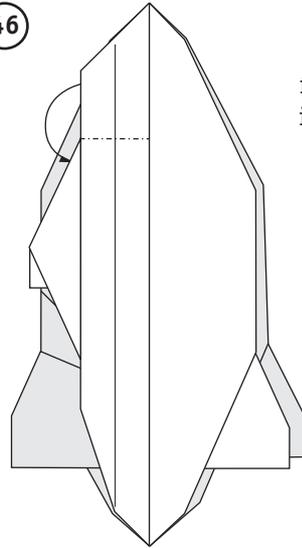second hardest
step)

44

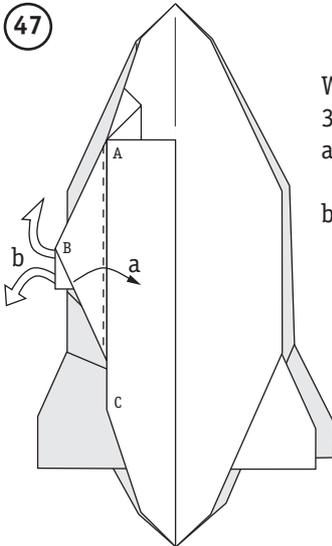stretch the half
bird base as far
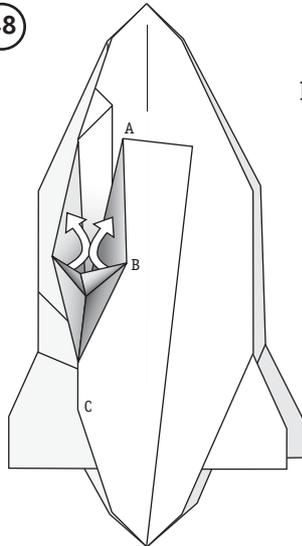as you can

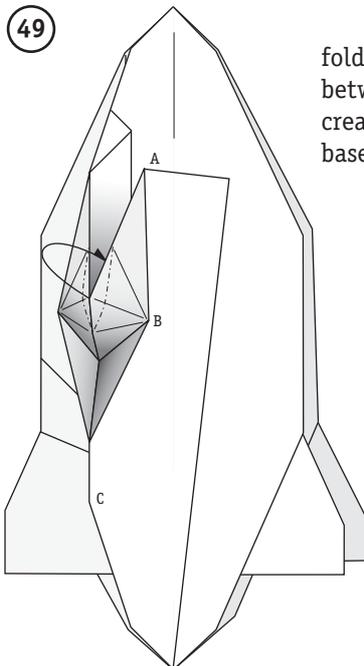(45) fold the left upper flap to the top

(46) fold to the inner

(47) We curve the gondola 3-dimensional now:
a) bing the left flap in front to you and
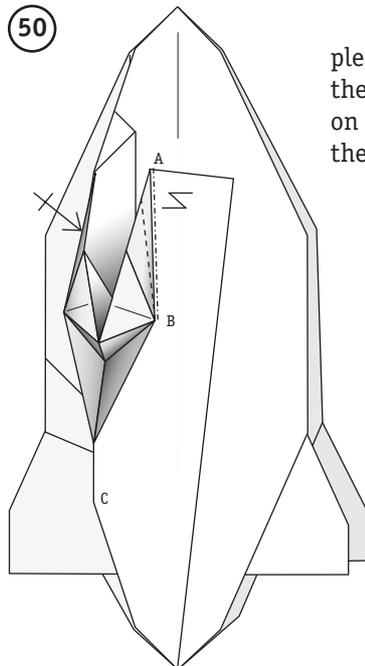b) spread it as shown in step 48, the model shell doesn't lie flat

b
a

A
B
C
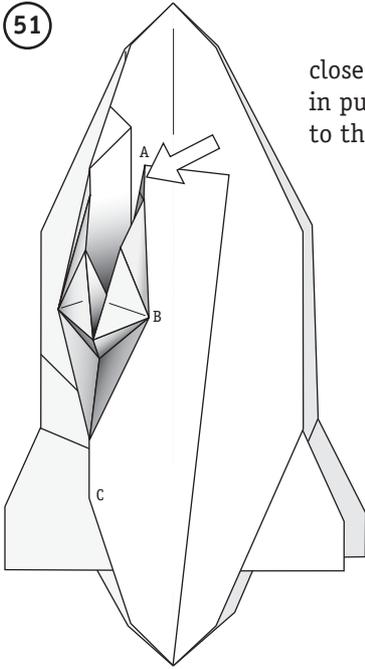
(48) pull out the paper

A
B
C

(49) fold to the inner between the existing creases (from half bird base folds)
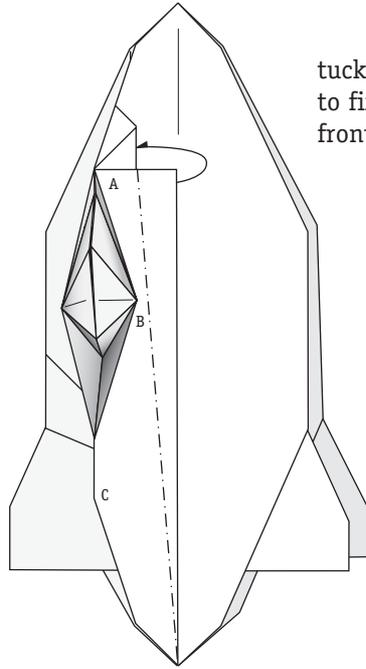
A
B
C

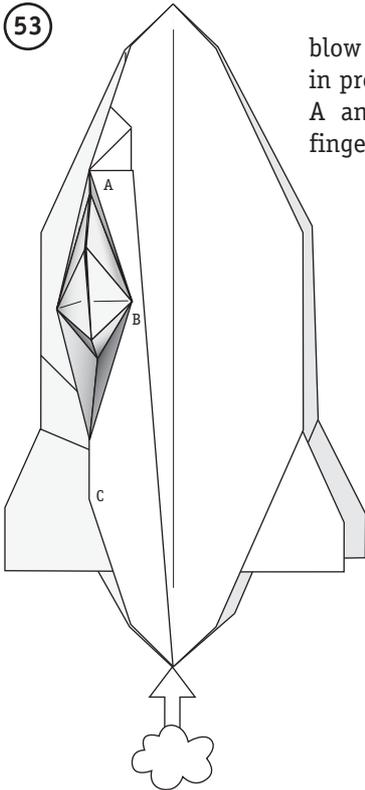(50) pleat-fold with using the edge A-B, repeat on the other side of the gondola

A
B
C

8

51

close the gondola's front
in pushing the tip A
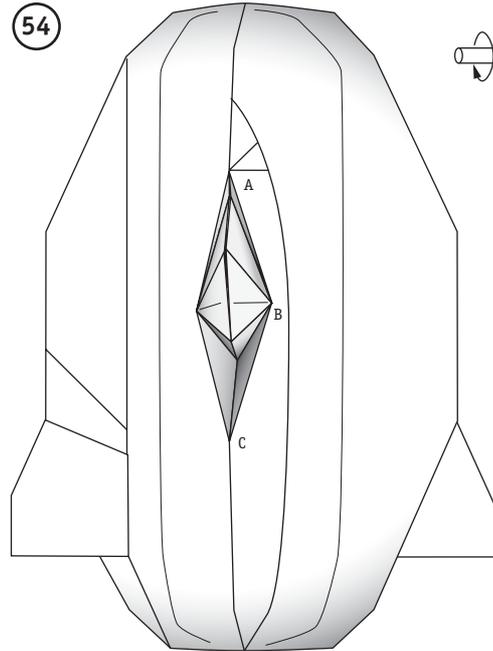to the left

52

tuck into the pocket
to fix the gondola
front

53

blow up the balloon
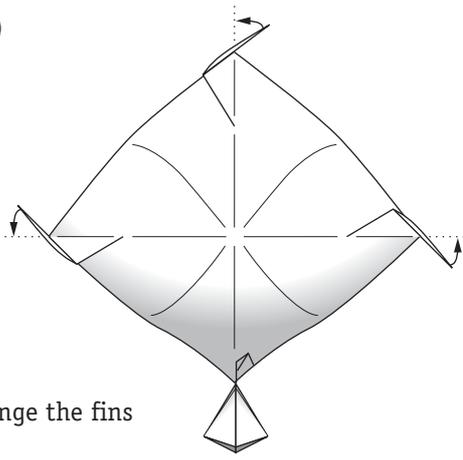in pressing points
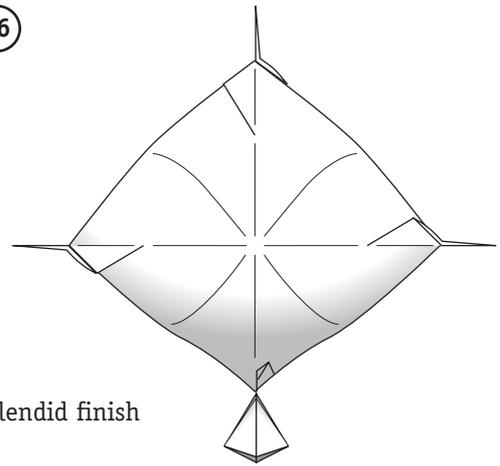A and C with your
fingers

54

90°

rotate the model verticaly: front view follows

arrange the fins

splendid finish