Question 1

An Aresti Basic Figure is defined as:

(Hint: Aresti Catalog, Part I, Paragraph 2)

Answer
Any maneuver that's suitable for the Primary and Sportsman categories
Any figure in Families 1 through 8
Any figure that has no added rolls
Any figure that does not involve negative G's

Question 2

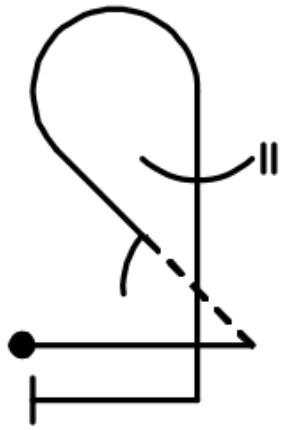
Aresti Complementary Figures are:

(Hint: Aresti Catalog, Part I, Paragraphs 4 and 5)

Answer
Found in Family 9
Rotational elements such as aileron rolls, snap rolls and spins
Are not figures in isolation, and must be superimposed on a basic figure
All of the above

Question 3

In the figure below, the sharp corners indicate:



(Hint: Arest Catalog, Section I, Paragraph 10)

Answer
A change of attitude that is less than 180°
The pilot should pull maximum G at those points
This flight path change should be flown in a continuous curve with a constant and significant radius
Both A and C

Question 4

Heading is the compass direction in which the airplane is pointed and in competition is judged:

(Hint: Rules 27.4.2, 27.5.2)

	Answer
	Relative to the actual wind aloft
	Relative to the X or Y axis, as appropriate
	On whether it compensates for any crosswind
	All of the above

Question 5

Flight path is defined as:

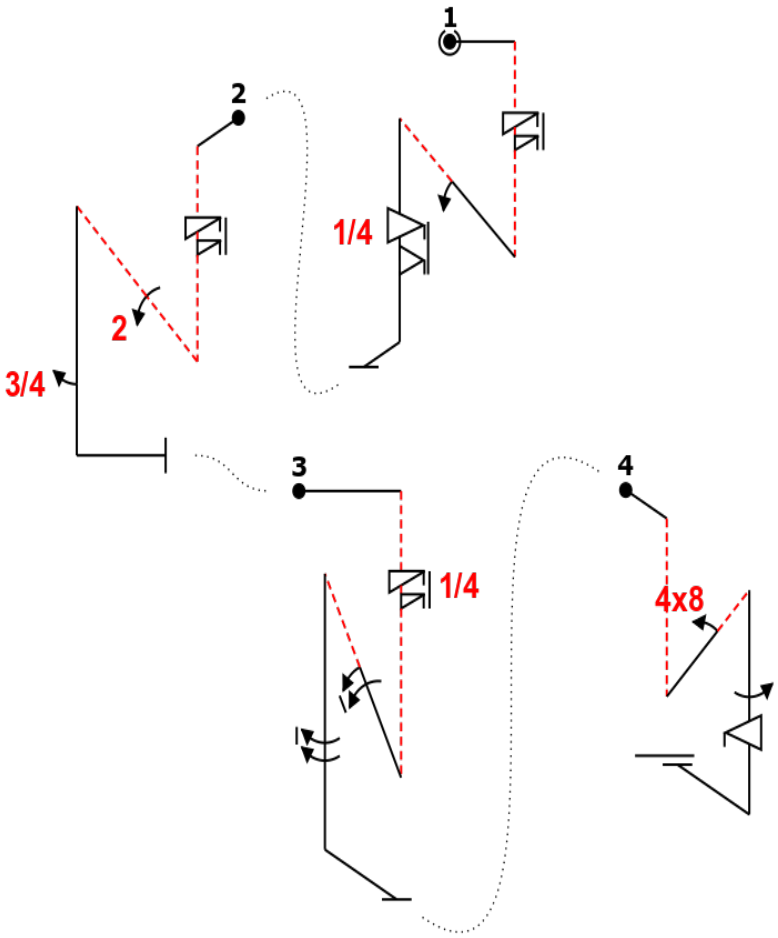
(Hint: Rule 27.1.1)

	Answer
	The attitude of the aircraft relative to the horizon
	The movement of the aircraft's center of gravity through the sky
	Judged by comparing the observed path to fixed references, such as the horizon or box axes
	Both B and C

Question 6

In the sequence below, which **Basic Figure** has a different catalog number than the others?

(Hint: Aresti Catalog, Family 1.3)



Answer
Figure 1
Figure 2
Figure 3
Figure 4

Question 7

You hear the Chief Judge clear an Unlimited competitor into the box. Figure 1 of the competitor's sequence is a humpty-bump. Without Signaling (aka "wing-wags"), the competitor dives into the box and flies a Cuban-8. You should:

(Hint: Rule 14.3.3, 14.3.5)

Answer
Ignore the figure because it was a safety check
Award a 0.0 score to Figure 1 and tell your recorder to write "Wrong Figure" in the Remarks column
Award a HZ to Figure 1 and tell your recorder to write "Wrong Figure" in the Remarks column
Tell your recorder to write a grade in the margin in case the figure turns out to be legitimate

Question 8

A competitor is flying a sequence with 15 figures. After successfully completing Figures 1 through 9, the competitor takes an Explicit Interruption. After signaling a restart, they repeat Figures 8 and 9, and then finish the sequence as drawn. As a Grading Judge, you should:

(Hint: Rules 15.1.1, 15.1.5, 26.5.2)

Answer
Award a HZ to Figure 8 with the notation "*added figure*", ignore the repeated Figure 9, and resume scoring on Figure 10
Award a HZ to Figure 9 with the notation "*added figure*" and resume scoring on Figure 10
Award a HZ to Figure 10 with the notation "*added figure*"
Ignore the repeated Figures 8 and 9, and resume scoring on Figure 10

Question 9

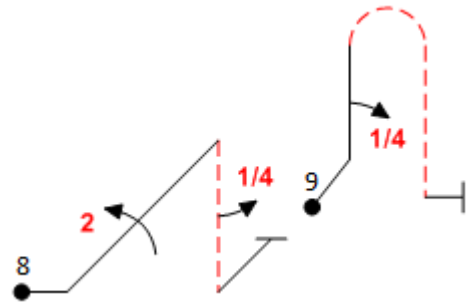
Which of the following does **NOT** meet the definition of an “implicit” program interruption?

(Hint: Rule 15.2.1)

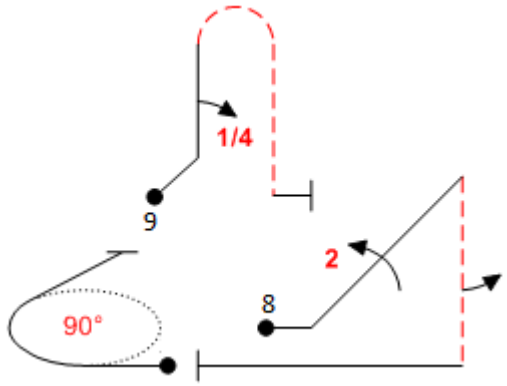
Answer
Omitting a figure
Adding a half-roll to correct an improper attitude (upright to inverted or vice versa) between figures
Correcting a heading deviation of 90° or more between figures
Flying a horizontal portion of a figure such that the obvious intent is to gain or lose altitude

Question 10

The competitor is expected to fly the sequence of figures below:



You observe the competitor perform the following maneuvers instead:



As a Grading Judge, you should:

(Hint: Rules 15.2.1(a), 15.2.2, 26.3.1(b), 26.5.2)

Answer
Award a HZ for Figure 8 for the heading error and a HZ for Figure 9 because the 90° turn is an inserted figure
Award a 0.0 for Figure 8 for the heading error and a 0.0 for Figure 9 because the 90° turn is an added figure
Award a HZ for Figure 8 for the heading error, treat the turn as an implicit interruption, and grade Figure 9
Award a HZ for Figure 8 for the heading error and a 0.0 for Figure 9 because the 90° turn is an inserted figure

Question 11

Just before a competitor begins a Free Program Performance, you notice that their "B or L" sequence drawings depicts a hammerhead with **½ roll** on the downline while the "C or R" drawing depicts the same Basic Figure with **1½ rolls** on the downline. How should you evaluate that figure?

(Hint: Rule 21.5.2)

Answer
Use the Aresti catalog numbers to determine which roll the competitor should perform
Award a HZ to the figure
Award an 'A' for Average
Use the drawing on the form that corresponds to the official wind direction (B, C, L, or R)

Question 12

While grading competitors, you must:

(Hint: Rule 26.1.1)

Answer
Ignore aircraft capabilities, noise, and speed
Avoid any feelings about the competitor
Not assign scores based on the difficulty of the figures
All of the above

Question 13

A competitor flies a figure with several major errors in heading and flight path, and you award a score of 0.0. Which of the following would be the best entry in the Remarks column?

(Hint: Rule 26.2.2)

Answer
By definition, a score of 0.0 means at least ten points of deductions, so there's no need to write anything in the Remarks column
"*JBF (Just Bad Flying)*"
"*Wrong figure*"
"*Many angular errors*"

Question 14

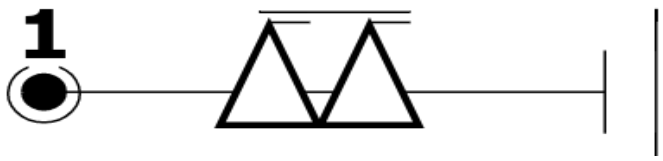
While grading a complex figure, you tally ten points of deductions and then the competitor finishes the figure in the wrong direction. You should:

(Hint: Rule 26.2.3)

Answer
Award a score of 0.0
Award a score of HZ
Ask the Chief Judge to call a Conference
Tell your Recorder to write "A for Average"

Question 15

A competitor is supposed to fly this double snap roll:



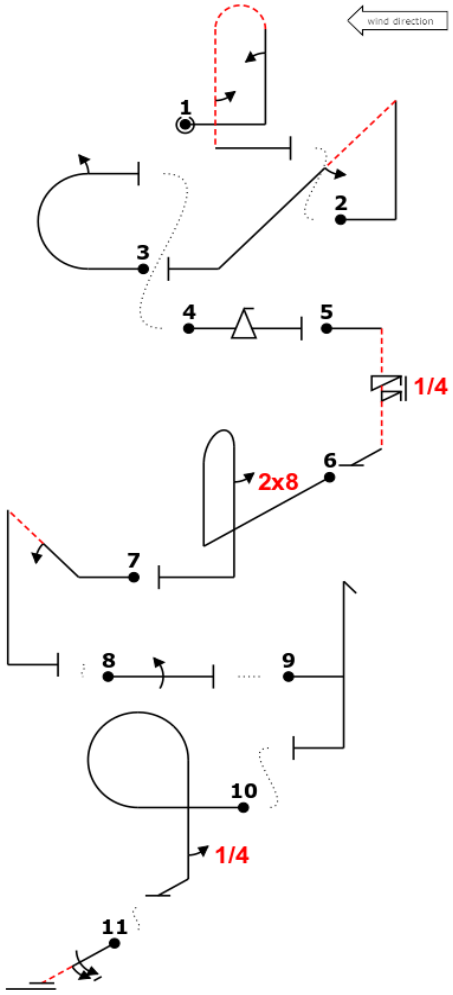
But instead of rotating 720°, the aircraft rotates 780° (i.e., 60° too far). Assuming the figure has no other faults, you should:

(Hint: Rules 26.1.5, 26.2.1(a), 26.3.1(c))

Answer
Award a score of -2.0 (60° error x 1 point per 5 degrees = 12 points, deducted from every figure's starti
Award a 0.0
Award a HZ
B or C; either is valid

Question 16

The competitor flies the following sequence as drawn until figure 6, which finishes going upwind. The competitor continues flying the rest of the figures with no Interruptions.



You **MUST**:

(Hint: Rules 26.3.1(c), 26.9.1, 26.9.3)

Answer
Grade all the figures because turns that change the flight path from the Y axis to the X axis are non-directional
Award a Hard Zero (HZ) for figure 6
Award a Hard Zero (HZ) for figures 6 thru 10 and score figure 11
Award a Hard Zero (HZ) for figures 6 thru 11

Question 17

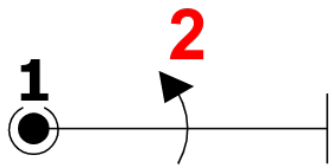
Under what circumstance(s) would you award a mark of 'A' for Average?

(Hint: Rule 26.4.1)

Answer
Your assistant calls the wrong figure by mistake, causing confusion about what the competitor is doing
The competitor executes a hammerhead pivot behind a cloud
You miss the beginning of Figure 1 because you did not see the pilot enter the box
Any of the above

Question 18

As a competitor flies a two-point hesitation roll, you look down briefly at the Form B/C/L/R and you're therefore not sure if the roll stopped completely when the aircraft was inverted.



You should:

(Hints: 26.4.1, 26.5.1, 28.21.5)

Answer
Award a HZ
Give the pilot the benefit of the doubt, and therefore no deduction
Award a numeric score based on your best guess
Award an "A"

Question 19

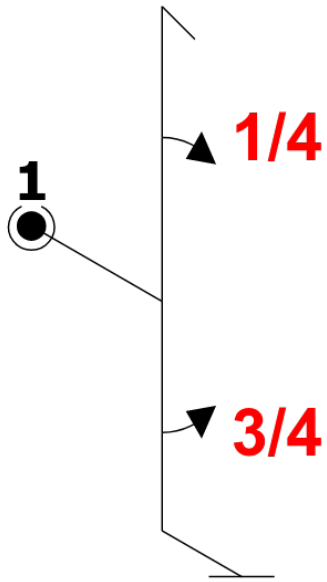
A competitor is supposed to fly a loop followed by a hammerhead. However, after 360° of pitch change (i.e., the entire loop), the aircraft continues to pitch up directly into the hammerhead. You should:

(Hint: Rule 26.8.1)

Answer
Deduct two points from the loop
Deduct one point from the loop and one point from the hammerhead
Award a HZ for the loop
Award a HZ for the loop and the hammerhead

Question 20

When performing the following maneuver the competitor **MUST**:



(Hint: Rules 26.9.2, 26.9.3)

Answer
Pivot the aircraft into the wind at the top of the maneuver
Pivot the aircraft downwind at the top of the maneuver
Fly the 1/4 and 3/4 rolls so as to exit opposite of the entry direction on the Y axis
Fly the 1/4 and 3/4 rolls so as to exit in the same direction as the Y axis entry

Question 21

The Zero-Lift Axis is:

(Hint: Rules 27.2, 27.3, 27.4)

	Answer
	The attitude at which the wing produces no lift
	Used as a reference when judging vertical lines
	Used as a reference when judging 45° lines
	All of the above

Question 22

A horizontal line should be flown:

(Hint: Rules 27.5.1, 27.5.2, 34.20.3.1)

	Answer
	With a heading parallel to the X or Y axis
	At a constant altitude (in powered aircraft)
	At a constant, reasonable angle (in gliders)
	All of the above

Question 23

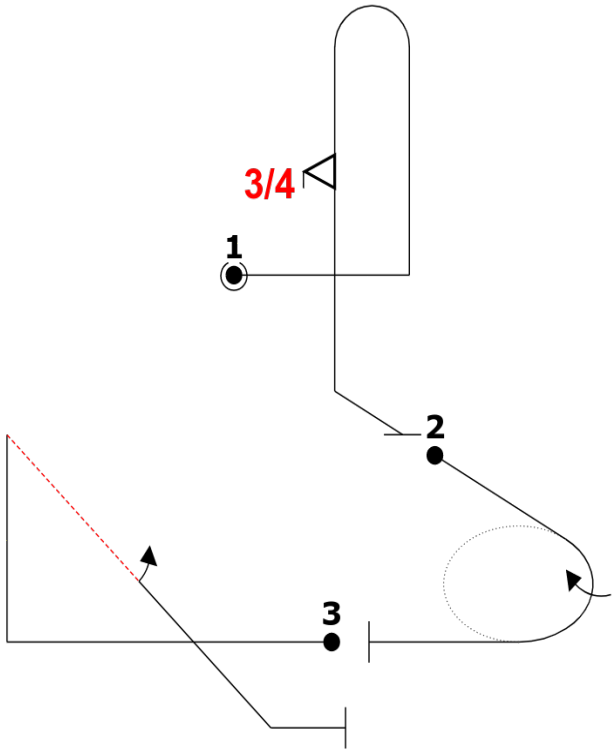
Errors in the roll, pitch, and/or yaw axes should be downgraded by:

(Hint: Rules 27.6.1)

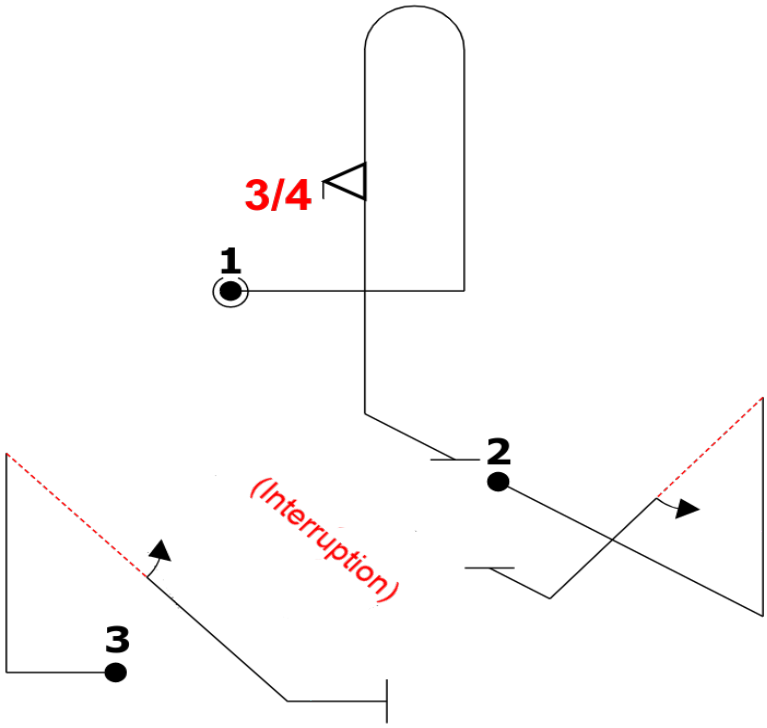
Answer
0.5 points for any perceptible error up to 2.5 degrees
1 point for errors greater than 2.5 degrees but less than 5 degrees
10 points for deviations of 50° up to but not including 90&deg
All of the above

Question 24

The competitor was supposed to fly these figures:



But flew these figures instead:



You should:

(Hint: Rules 26.3.1, 26.5.1, 26.5.2)

Answer
Ask the Chief Judge to call a conference to review what happened
Award a HZ on Figure 2 for omitting the rolling turn, award a HZ on Figure 3 for flying the Shark's Tooth on the wrong axis, ignore the second execution of the Shark's Tooth, and resume grading on Figure 4 (not shown)
Award a HZ on Figure 2 for omitting the rolling turn, award a HZ on Figure 3 for flying the Shark's Tooth on the wrong axis, award a HZ on Figure 4 (not shown) for adding the second Shark's Tooth, then resume grading on Figure 5
Award a HZ for replacing the Figure 2 rolling turn with the Y-axis Shark's Tooth, then score Figure 3 as usual

Question 25

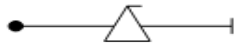
As a competitor pulls to a vertical line, you note the pitch attitude (ZLA) reaches 95° and then immediately returns to 90°. The appropriate downgrade for that error is:

(Hint: Rules 26.6.1, 27.6.1)

Answer
Not more than 1 point
1 point
1 point for the over-pitch plus 1 point for the correction
No downgrade because the aircraft attitude never stabilized at 95°

Question 26

A competitor flies the figure shown below:



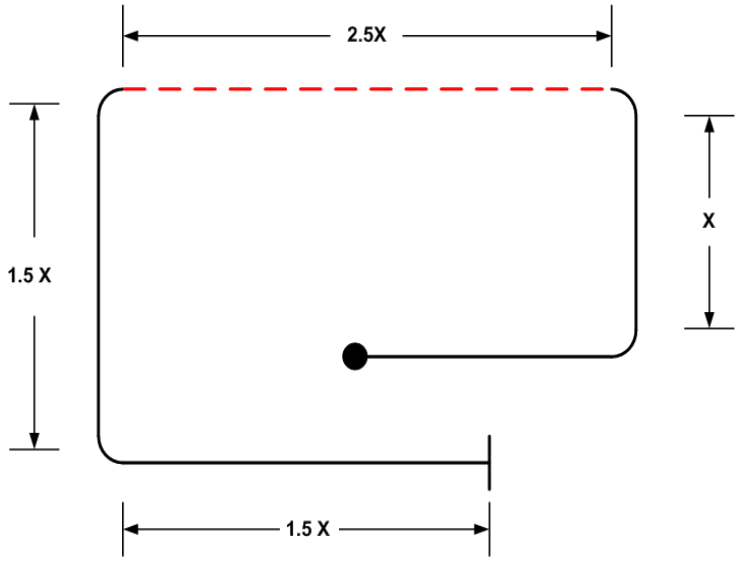
You observe the nose pitching up as the aircraft begins to autorotate. As the aircraft passes through 180° of rotation, you see that it has returned to the original attitude and the tail is no longer rotating off-axis in a corkscrew motion. The aircraft continues this on-axis rotation until it returns to upright, wings level flight. Assuming no other flaws, the appropriate score for this figure is:

(Hint: Rules 26.2.3, 26.3.1, 26.10.1, 27.6.1, 28.22.2, 28.22.7)

Answer
0.0
5.0
10.0
HZ

Question 27

A competitor flies a square loop that looks like this:



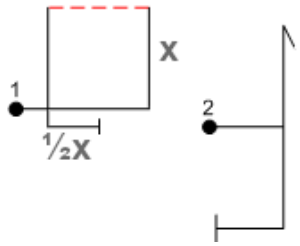
How many points should you deduct for the line length variations?

(Hint: Rules 27.9.4, 27.9.5, 28.12.2)

Answer
1 point
2 points
3 points
4 points

Question 28

A competitor flies these figures:



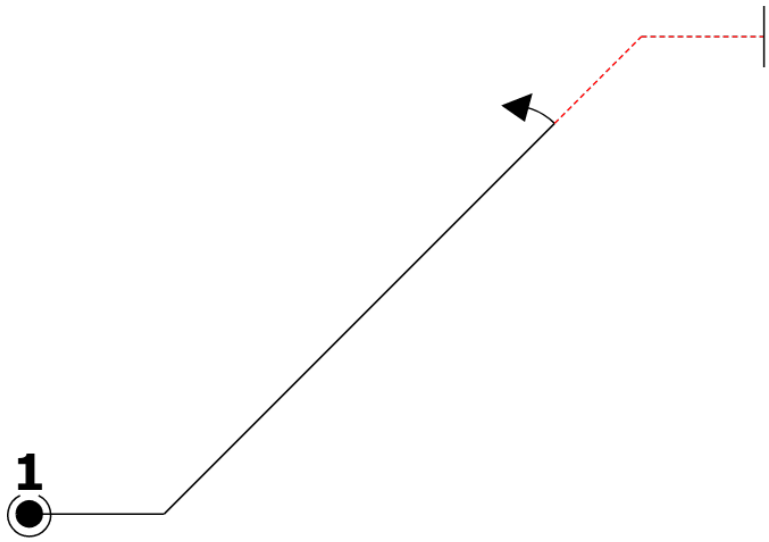
You see that the square loop's final horizontal line is half as long as the first vertical line and then the hammerhead begins. The appropriate deduction for that fault is:

(Hint: Rules 27.9.4 and 28.12.2)

Answer
HZ because the Square Loop was not completed before the Hammerhead began
HZ because the Square Loop was not completed before starting the Hammerhead and downgrade the Hammerhead by one point for no line between figures
Deduct two points from the Square Loop for the 2:1 ratio error in the last horizontal line
Deduct two points from the Square Loop for the 2:1 ratio error in the last horizontal Line, give the “benefit of the doubt” for completing the square loop, and deduct one additional point from both the Square Loop and the Hammerhead for "no line between"

Question 29

A competitor flies a 45° upline with a half-roll. The resulting figure looks like this:



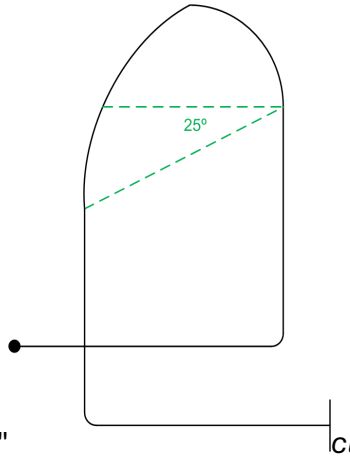
Assuming the line before the roll is 600 feet long and the line after the roll is 150 feet long, you should deduct:

(Hint: Rule 27.9.4)

Answer
1 point
2 points
3 points
4 points

Question 30

A competitor flew a Humpty Bump with a top radius that had a perfect first quarter, but the second quarter was "*pinched*" and "*closed low*":



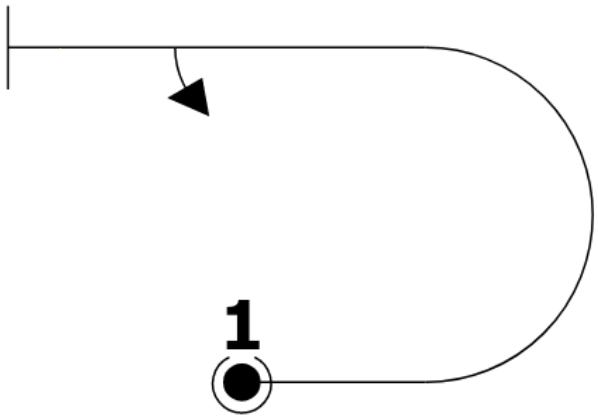
You **MUST** deduct:

(Hint: Rules 27.7.1, 27.10.2, 27.10.4)

Answer
1 point
2.5 points
5 points
An amount that is proportional to the error and consistent with your method for scoring radii

Question 31

You see a competitor fly an Immelman that looks like this:



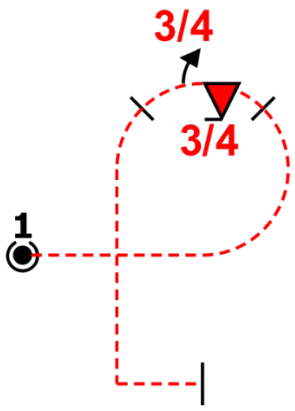
The appropriate deduction is:

(Hint: Rules 27.7.1, 27.11.2)

	Answer
	No downgrade
	At least 1 point
	2 points
	An amount proportional to the error

Question 32

A competitor flies the following figure:



You see roll combination begin 5° before the apex of the loop and end 15° after the apex, and the pause between the two roll elements occurs 5° off center. You **MUST** award a downgrade of:

(Hint: Rule 27.12.3)

Answer
1 point for the non-centered combination
2 points for the non-centered combination
1 point for the non-centered combination plus 1 point for the non-centered pause between rolls
2 points for the non-centered combination plus 1 point for the non-centered pause between rolls

Question 33

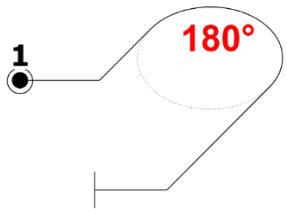
A competitor performs a loop on the X-axis while flying directly over the judges' heads. You should:

(Hint: Rules 27.15.1, 29.3.1)

Answer
Score the figure as best you can
Score the figure as best you can and make a mental note to deduct from the Presentation score at the end of the flight
Score the figure as best you can, deduct two points because the figure cannot be properly graded, and make a mental note to deduct from the Presentation score at the end of the flight
Tell your recorder to mark the figure as "A" for Average

Question 34

At the top of the climb for a wingover, you should deduct 1 point per 5° if:



(Hint: Rule 28.2.2)

Answer
The bank angle is more or less than 90 deg (i.e. wings not perpendicular to the horizon)
The fuselage is not parallel to the horizon (i.e. the longitudinal axis of the aircraft is not horizontal)
The aircraft's heading is more or less than 90° from the axis on which the figure started
All of the above

Question 35

As a competitor performs a 90° upright competition turn, you see the aircraft roll 50° without changing heading, then begin to change heading while rolling an additional 10°. After 90° of heading change, you see that the roll back to wings-level was slower than the initial roll. Assuming no other defects, you should deduct:

(Hint: Rules 28.5.2, 28.5.4)

Answer
1 point
2 points
3 points
4 points

Question 36

A competitor flies a 360° rolling turn with 4 rolls to the outside, starting from upright. You see the aircraft pass through the upright wings level attitude at 85°, 190°, 265°, and 360° of turn. Assuming no other defects and a constant rate of turn, the appropriate downgrade is:

(Hints: Rules 28.4.2, 28.6.4, 28.6.5)

Answer
4 points for being off heading at the cardinal points.
No deduction because the figure finished on the correct heading
1 point for every 5° that the aircraft was off heading at the cardinal points
A proportional amount for each variation in rate of roll.

Question 37

While watching a hammerhead pivot on a day with calm winds aloft, you see the aircraft move laterally by two wingspans. The appropriate deduction is:

(Hint: Rule 28.8.3)

Answer
1 point
2 points
3 points
4 points

Question 38

A competitor executes a Hammerhead pivot to their left with a strong wind from their right. The aircraft does not climb or descend during the pivot, and you see no errors in heading, roll or pitch. However, the aircraft moves approximately two full wingspans downwind during the pivot. Your grade should be:

(Hint: Rule 28.8.5)

Answer
7.0
8.0
9.0
10.0

Question 39

Which one of the following statements is **INCORRECT**?

(Hint: Rules 26.9.2, 28.9.2, 28.9.4, 34.20.5.1)

Answer
A tailslide drawn with a dashed line indicates wheels up tailslide
After a tailslide pivot, the aircraft may swing past vertical without penalty
Any tailslide on the X axis must be flown as drawn with respect to the official wind
A glider performing a tailslide is only required to slide by a visible amount

Question 40

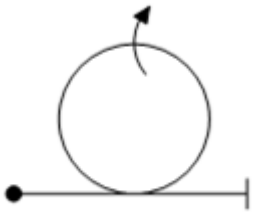
Figures in Family 7.8.1 through 7.8.16 have special criteria for:

(Hint: Rules 28.16.2, 28.16.3, 28.16.4)

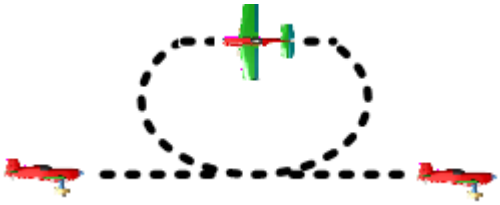
Answer
The size of the radii (i.e. looping lines must have matching radii)
The altitudes of the radii (i.e. the centers of the Looping Lines must match in altitude)
Line lengths (i.e. horizontal entry and exit lines must be at the height of the apex or nadir... except for the exceptions)
All of the above

Question 41

The competitor is flying the figure below.



The roll is flown on a straight line, like this:



The appropriate deduction for the flat spot is:

(Hint: 27.12.2)

	Answer
	At least 0.5 points
	At least 1 point
	At least 2 points
	An amount proportional to the error

Question 42

As a competitor executes a four-point roll, you see the aircraft slightly (i.e. less than 2.5 degrees) over-rotated at each of the four stops, and the hesitation between the second and third quarter-rolls is longer than the first. The **MINIMUM** downgrade for those errors is:

(Hint: Rules 27.6.1, 28.21.2, 28.21.4)

Answer
1 point
2 points
3 points
4 points

Question 43

While watching a snap roll, you see the aircraft yaw 5° and roll 5° before any pitch change. The appropriate deduction is:

(Hint: 28.22.3, 28.22.6)

Answer
0 points
1 point
2 points
HZ

Question 44

Which of the following statements about spins is **INCORRECT**?

(Hint: Rules 28.24.2, 28.24.5, 28.24.7, 28.24.8)

Answer
At the start of the spin, the aircraft must move simultaneously around all three flight axes
During autorotation, the aircraft must maintain a constant pitch angle and rotation rate until the correct amount of rotation is reached
If you perceive the aircraft spiraling (i.e. no stall/autorotation) you must award a HZ
A vertical downline must be established simultaneous with or shortly after autorotation ceasing

Question 45

Which of the following statements about Presentation marks is **CORRECT**?

(Hint: Rules 29.3.1, 29.3.2)

Answer
One factor in the Presentation score is balance on the X axis
The Presentation score includes all figures graded during the performance
Judges must apply their methodology consistently to every pilot
All of the above

Question 46

A **glider** competitor performs these figures:

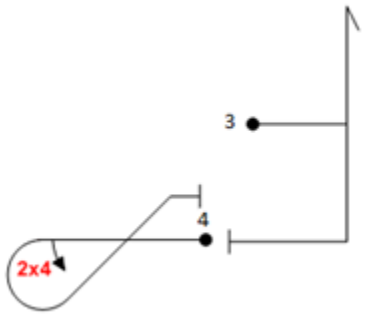


Figure 3 finishes on a line 10° up from horizontal, then the 2x4 roll is executed on the same flight path before transitioning to the looping segment of figure 4. The appropriate downgrade(s) for the horizontal lines are:

(Hints: 26.6.1, 27.5.1, 27.6.1, 34.20.2.1)

Answer
Zero points
2 points on Figure 3
2 points on Figure 4
2 points on both Figure 3 and Figure 4

Question 47

In a Glider Intermediate sequence, the pilot flies an exact 45° attitude on a 45° internal line. The appropriate deduction is:

(Hints: Rules 27.4.1, 27.6.1, 34.20.1.1)

Answer
None, because gliders can fly straight lines at any "reasonable angle"
None, because the aircraft's attitude exactly matches the figure as drawn
Three (3) points because Intermediate Glider are expected to fly 45° lines at 30°
None of the above

Question 48

You are about to grade a Four Minute Freestyle program. Which of the following is **CORRECT**?

(Hints: Rules 35.12.1, 35.13, 35.14)

Answer
There are ten Freestyle objectives
Maneuvers may be flown on multiple axes of flight (in addition to the usual X and Y axis)
Grades for each objective range from 10.0 to 0.0 in increments of 0.5
All of the above