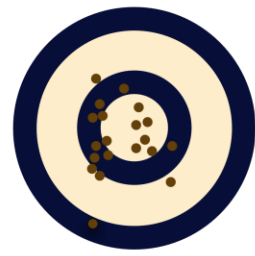# ORION
Scoring System

Daisy National BB Gun Championship

Team Leaders Briefing
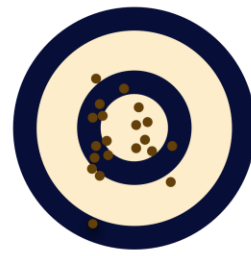
Erik Anderson Ph.D.

Shooter's Technology LLC

2 July 2015

Online results available at
www.orionresults.com/daisy

Logistics

- **Team Leaders Briefing**
  Saturday14:15 to 15:00, team coaches only.

- **Stat Officers and Coaches Clinic**
  Sunday 10:00 to 11:00, open to all.

- **Orion's Advance Topics**
  Sunday 13:00 to 14:00, open to all but intended for experienced Orion users.

- **Please ask questions, make comments.**

- **Today's presentation available for pickup. Tomorrow's presentations via email.**

BB Gun Scoring and Orion

2012 Virginia 4-H Championship
World's First Electronically Scored BB Gun Match
Scored with Orion

2013 Georgia 4-H Championship
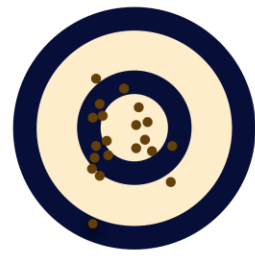World's Largest BB Gun Competition
Scored with Orion

Daisy®

2014 Daisy National Championships
First National BB Gun Championship
Scored Electronically with Orion
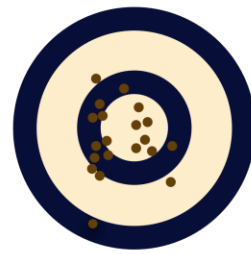
Q: Why is the sport going digital?
A: Orion is fairer, faster, and much more accurate.

What is the Orion Scoring System?

- An electronic scoring system: A tool to score targets.
  - Windows based software combined with commodity scanners.
- A tool to help run competitions.
- Online results provider.
- A tool to help teach marksmanship.

Online Results

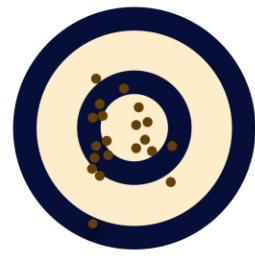## www.orionresults.com/daisy

- Updated throughout the tournament.
  - Online scores are preliminary.
  - Please wait until the review period to address any concerns.
  - Test scores will be included.
- Scrolling leader board outside range / online.
- Official results will be printed and displayed at the conclusion of each day.
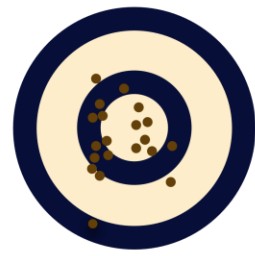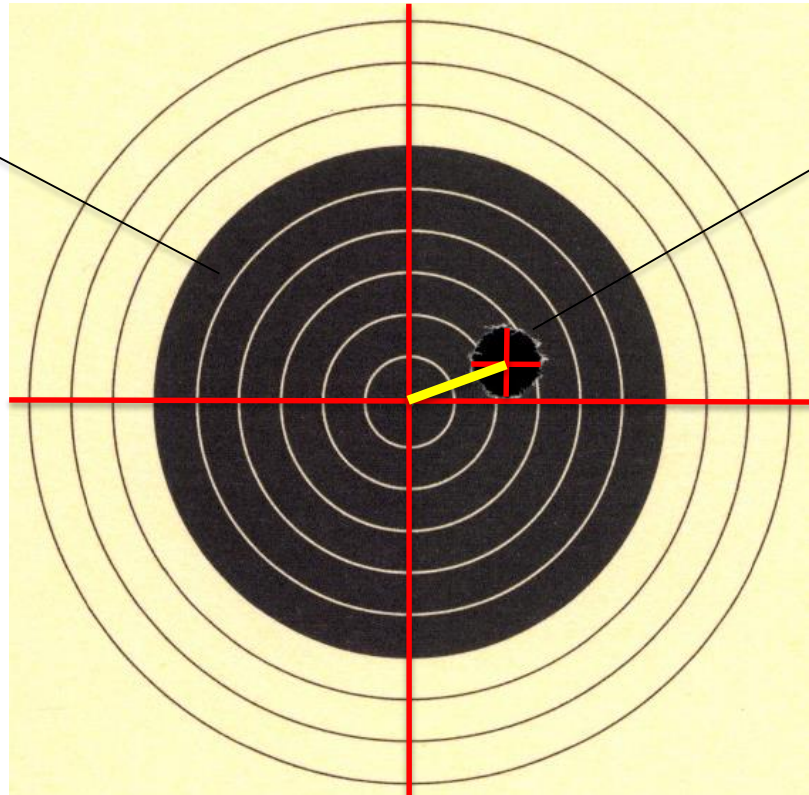
Internet Access
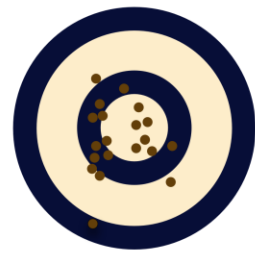
- Network Name:
- ID:
- Password:

How Does Orion Score?

1. Orion uses the edge of the aiming bull to find the center of the target.
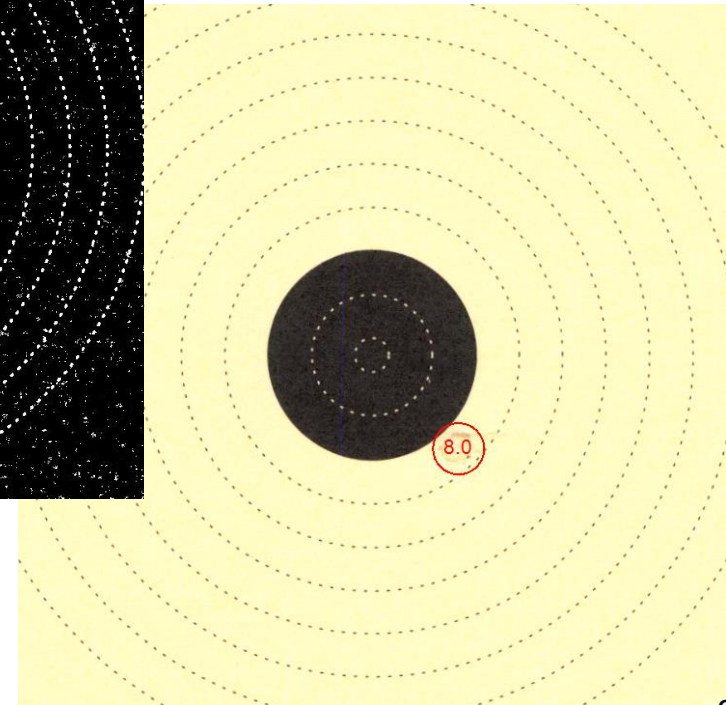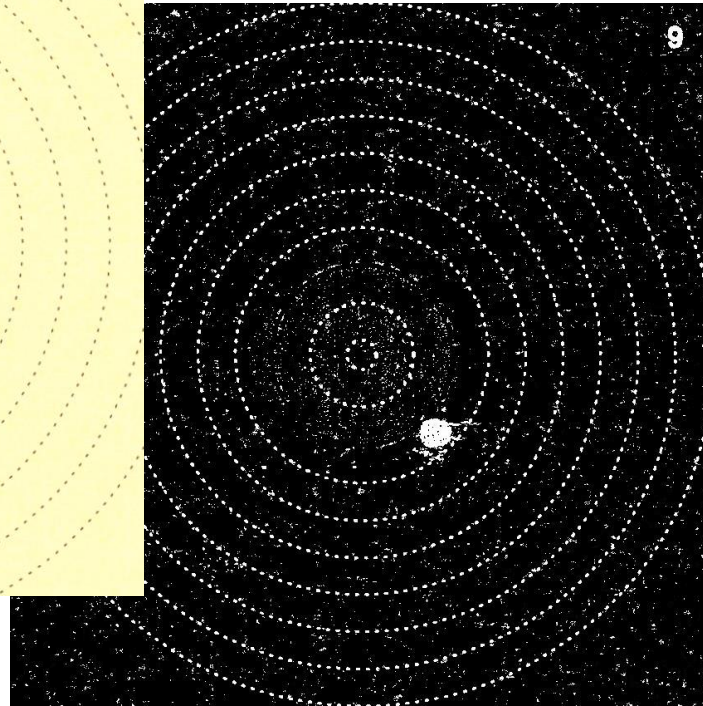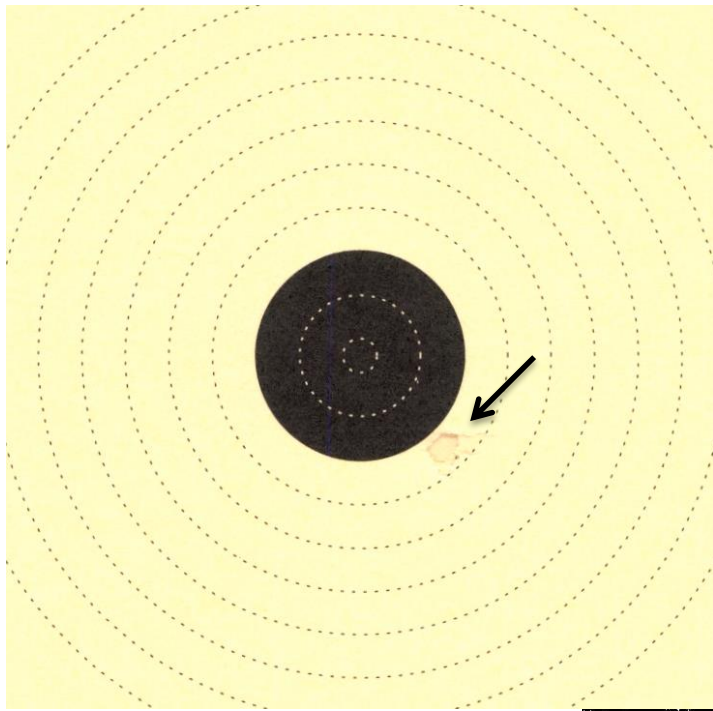
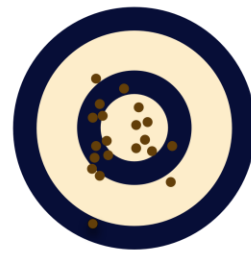2. Orion uses the edge of the bullet hole to find the center of the shot.

3. The distance between the center of the aiming bull to the center of the shot (i.e. the radial distance) is used to calculate the score value.

How Does Orion Score

Orion's Scanners

Canon DR-M160ii
About 55 targets a minute.
Ideal for small to large ranges with
frequent use.

Canon DR-6010C
About 55 targets a minute.
Ideal for large ranges, frequent use, and
single bull targets.

Canon P-208
About 6 targets a minute.
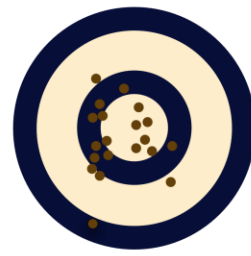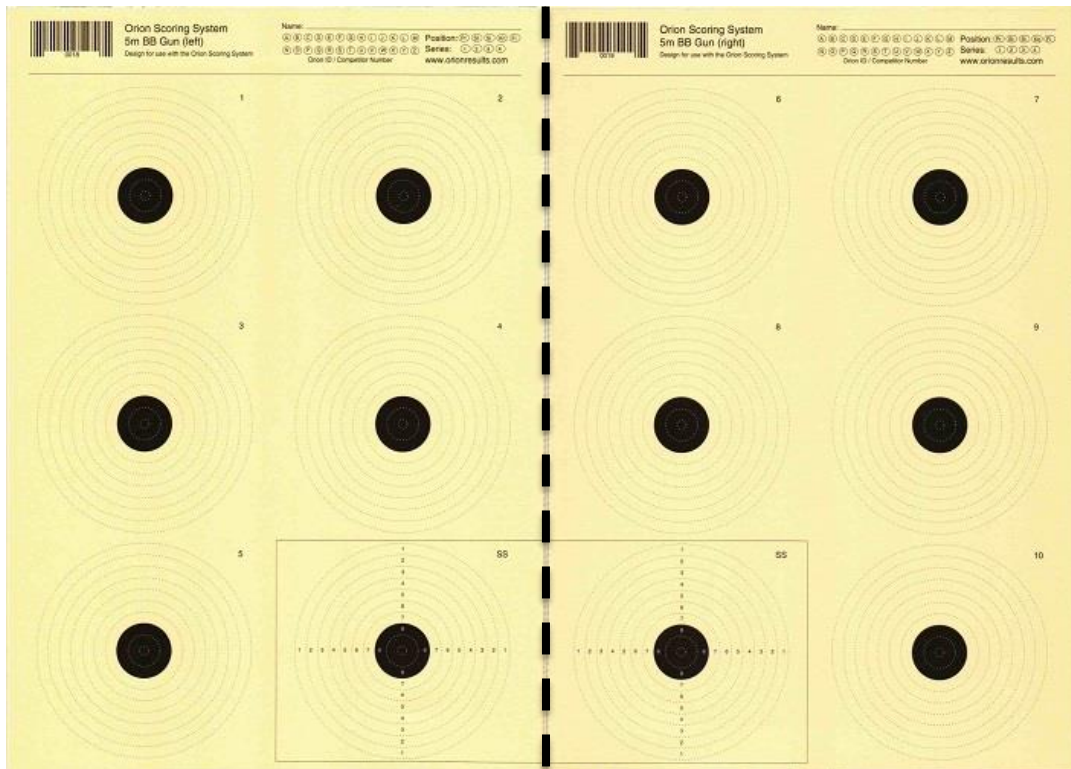Ideal for home use
and very small clubs.

Canon DR-C240
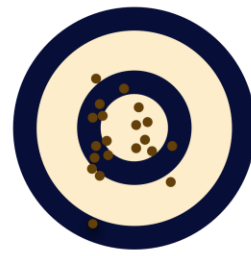About 25 targets a minute.
Small and medium ranges.

Canon

Orion Targets

- High quality target paper
- Perforated down the center; sized to fit commodity scanners.
- Scoring rings are printed for the shooters reference only.

Scanable Test Sheets

- Scans and scores test results.
- True / False and Multiple Choice

Handling Targets

- Targets will be picked up in bundles per position.
    - 7 Answer sheets, 1 for each athlete.
    - 7 Targets, 1 for each athlete.
    - Each targets labeled with the athlete's name and competitor number.
- Do not bend or step on them.
- Keep them dry.
- Have a single team leader keep track of targets before they are shot. Keep them in the supplied folder for safe keeping.
- Use provided push pins to hang.
- Remove your targets quickly, hand them to RO or Daisy Staff quickly.
- Do NOT separate your left and right targets.
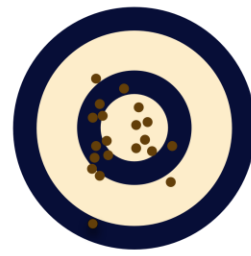
Orion BB Gun Target

Make sure the competitor barcode on the left hand target matches the barcode on the right hand target.

Make sure all writing and the barcode label is above the reference line.

Sighter bull is demarcated with a rectangle. Remaining bulls numbered 1 through 10.
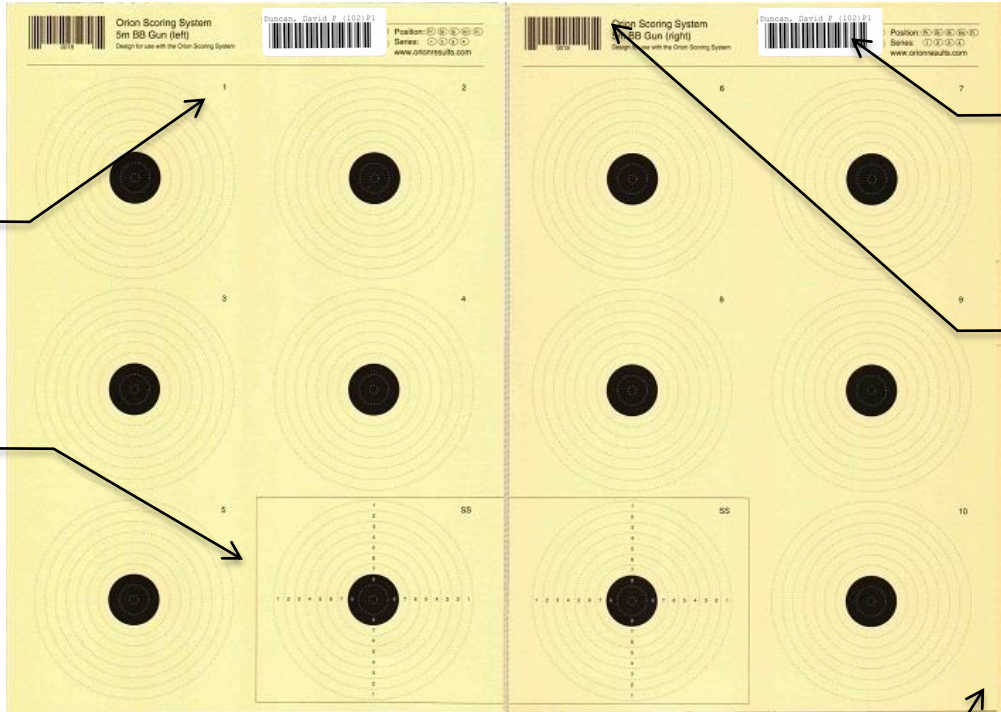
Barcode on the right tells Orion who the athlete is, position, and series number.

Barcode on the left tells Orion this is a BB Gun target.

Use pushpins to hang targets.

Don't bend or step on the targets!
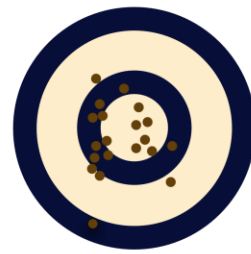
Barcode Labels

- Barcode labels are encoded with the target's position and series. "P1" for examples is short for prone series 1.
  - P = Prone
  - S = Standing
  - I = Sitting
  - K = Kneeling
  - T = Test
- Relay (R), Firing Point (FP), and Team/Organization listed on second line.
  - All Relays are listed as 1

Athlete's name

Competitor number

Position

Series

Name: _____

Adams, Foster (131) P2
R1 FP1 Paulding

tion: (Pr) (St) (Si) (Kn) (Fi)

es: (1) (2) (3) (4)

.orionresults.com

Firing Point

If barcode labels are used, position and series bubbles may be left blank.

Relay

Team Name

Check that you are hanging the right target for the right athlete.

14
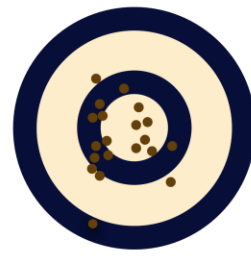
Barcode Label Coloring

- All of your team targets should have the same color barcode label.

- Competitor numbers should be sequential.

- Competition target label's will be blue or white for the regular match, and yellow for the champions match.

Color denotes which Orion system will record your team scores.

Name: _____
Ⓐ Ⓑ Ⓒ   Adams, Foster (131)P2   tion: Ⓟʳ Ⓢᵗ Ⓢⁱ Ⓚⁿ Ⓕⁱ
Ⓝ Ⓞ Ⓟ   R1 FP1 Paulding   es: ① ② ③ ④
                                                   .orionresults.com
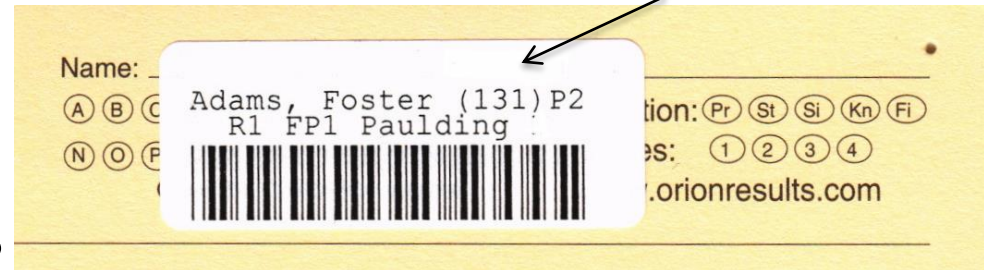
While you are shooting

- Fire only 1 shot per bull.
- Fire only 10 record shots.
- Alert the range officer if:
  - First sighter shot is outside the sighter rectangle. RO should mark the shot as a sighter.
  - Wrong target is hung for an athlete. RO should write in the name of the correct shooter and black out the barcode label.
  - Fire 6 on one target 4 on the second. RO should mark accordingly.
  - Bullet bounces back hitting the target in reverse.

Review Period

- There are no challenges.
- There will be a review period at the conclusion of each day.
  - Approximately 60 minutes after last shot is fired.
  - Targets will be stacked for each team along with your athlete's individual score sheet.
  - Test may be reviewed during Sunday's review time.
- On the results:
  - Check to make sure individual athletes are correctly categorized as "team member" or "alternate."
  - Check that your team correctly lists your "team members."

Individual Score Sheet

Athlete's name

Match name

Aggregate score, including test. The first integer is the score, the second is the number of inner tens.

Each shot is listed separately.

Shot's score. Integer value listed first, then decimal score in parenthesis. Asterisk represents inner ten.

Haralson County BB Invitational
Frank, Morgan (102): 481 - 21
Team: Carroll County 1
Hometown: Carrollton, GA
Date: Saturday, 27 February 2016

Shot	Bull	Score	X Pos.	Y Pos.	Radius
P1	1	10*(10.4)	2.17	0.63	2.26
P2	2	10*(10.2)	-2.15	1.83	2.83
P3	3	10*(10.7)	-0.33	-1.00	1.05
P4	4	10*(10.9)	0.26	0.19	0.32
P5	5	10*(10.2)	-3.01	-0.07	3.01
P6	6	10(10.0)	-3.59	-0.84	3.68
P7	7	10*(10.6)	-0.83	-0.84	1.18
P8	8	10(10.0)	-0.23	3.74	3.75
P9	9	9(9.9)	3.95	-0.32	3.96
P10	10	9(9.8)	2.09	-3.83	4.37

PR 1: 98 - 6
Group Center: (-0.17mm, -0.05mm)
Group Area: 35.77mm^2
Group Roundness: 1.29

Series score

Visual display of shot group, plus graphical group analysis

Group analysis quantitative values.

Aiming bull number, labeled 1 – 10.

Cartesian coordinates and radial value, measured in mm.

Interpreting Score

- Aggregates
    - "94 – 2" means a score of 94 with 2 inner tens.
    - "87 – 0" means a score of 87 with 0 inner tens.
- Individual Shots
    - 10*(10.4) means an inner ten, and a decimal value of 10.4.
        - Asterisk denotes inner ten.
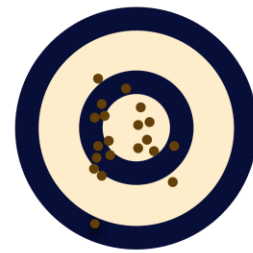   - 10(10.1) means a ten, and a decimal value of 10.1.
    - 8^(8.7) means an eight, and a decimal value of 8.7.
        - Carrot (^) denotes a manually modified shot.
- Decimal Values
    - For reference only, not used to determine rankings.
    - Each integer ring is further divided into 10 "sub-rings."
    - Highest value is a 10.9.
    - No correlation between decimal value and inner tens.
    - Commonly used in Finals.

Reviewing the Test

Question 1: A Correct
Question 2: B Correct
Question 3: C Correct
Question 4: D Correct
Question 5: E Correct
Question 6: A Correct
Question 7: A Wrong (B)
Question 8: C Correct
Question 9: D Correct
Question 10: E Correct
Question 11: A Correct
Question 12: Not Marked Wrong (B)
Question 13: C Correct
Question 14: D Correct
Question 15: E Correct
Question 16: E Wrong (A)
Question 17: A Wrong (B)
Question 18: C Correct
Question 19: D Correct
Question 20: E Correct
Question 21: A Correct
Question 22: B Correct
Question 23: C Correct
Question 24: D Correct
Question 25: E Correct
Question 26: A Correct
Question 27: B Correct
Question 28: B Wrong (C)
Question 29: D Correct
Question 30: E Correct
Question 31: A Correct
Question 32: B Correct
Question 33: C Correct
Question 34: D Correct
Question 35: E Correct
Question 36: A Correct
Question 37: A Wrong (B)
Question 38: C Correct
Question 39: D Correct
Question 40: E Correct
Question 41: B Wrong (A)
Question 42: B Correct
Question 43: C Correct
Question 44: D Correct
Question 45: A Wrong (E)
Question 46: B Wrong (A)
Question 47: C Wrong (B)
Question 48: C Correct
Question 49: D Correct
Question 50: E Correct

Test : Murray, Chris J (chris) - T 1: 80

Question 1: A Correct
Athlete filled in "A" (or true), which is the correct answer.

Question 12: Not Marked Wrong (B)
Athlete either didn't answer the question, or did not fill in the bubble correctly.
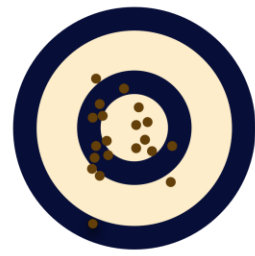The correct answer was "B".

Question 28: B Wrong (C)
Athlete filled in "B" which is the wrong answer, the correct answer was "C".

Test : Murray, Chris J – T 1: 80
Total score on the test, 80 points.

Note: In the true false portion of the test, the Individual Score Sheets report True as "A" and False as "B".

What to look for during the review

- Obvious errors, scored shots that are not a reasonable interpretation of the physical shot hole.
- Obvious errors mostly caused by:
    - Tears around the shot hole or near the corners of the target.
    - Two shots very near each other.
    - A shot hole that collapse in on itself.
- Correctly assigned penalties.
- Bring any questions you have to the statistical officer.
- Its unethical to ask for every 9.9, 8.9, etc to be looked at.
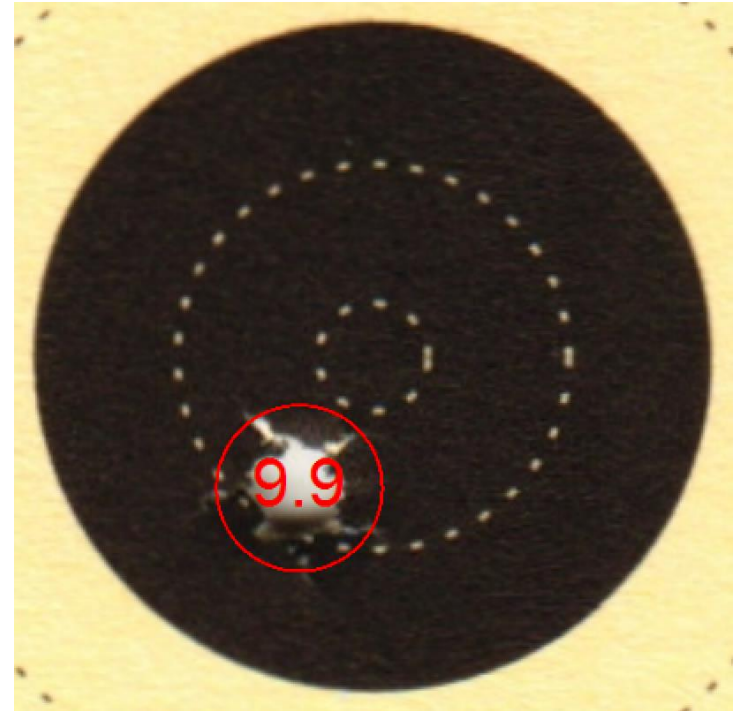
This is not an obvious error, this is an 9!
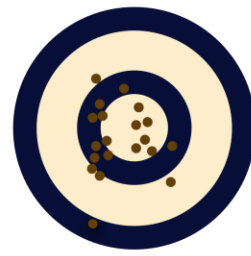
Questions

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Office Hours and Contact Information
Tuesday through Friday 10AM – 6PM
Saturday : 9 AM – 4PM
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