

## VII. LAWN AND GARDEN TRACTOR OPERATOR'S CONTEST

### A. GENERAL RULES

- There are three contest divisions--Beginner, Junior and Senior.

Beginner contestants must be 8-10 years old on January 1 of the contest year.

Junior Division contestants must be 11-13 years old on January 1 of the contest year.

Senior Division contestants must be 14 or older on January 1 of the contest year.

- Contestants are judged on safety at all times while at the contest site: before, during, and after their contest operation. At the discretion of the judges, unsafe operation may disqualify a contestant.
- At the state contest a separate course is provided for each division.
- The driving order should be determined by allowing the contestants to draw numbers.
- The penalty scoring system is to be used. Unanswered or incorrectly answered questions and violations of rules draw penalty points for the contestant. In each division the contestant who completes the event with the lowest total score or number of penalty points is the contest winner.
- While at the contest, all participants are scored on safety, written quiz, parts identification, Lawn and Garden Tractor operation on the course, and time.
- The driving event is timed and scored on the basis of one-penalty point for each second of operation. However, penalty points for safety violations, hit stakes, etc. are severe enough that the importance of speed is minimized.

- In both divisions, failure to complete the course in eight minutes results in the driver being assessed a penalty of 400 points.

Note: Officials, prior to the contest, may waive the eight-minute time limit.

- In case of a tie score for an award, the tie is broken using the contestants' scores in the specific scoring categories: safety, written exam, parts identification, obstacle course score (lawn and garden tractor operation on course), and time on course. The order for breaking a tie is:

1. safety
2. written exam
3. parts identification
4. obstacle course score
5. time

If comparing the contestant's scores in each of the above categories fails to break the tie, the contestants re-drive. (Safety, obstacle course score, and time is counted.)

- Any rule or interpretation not covered here is decided by the superintendent and assistants of the contest. Their decisions are final.

## **B. LAWN AND GARDEN TRACTORS**

**Note:** Safety devices will not be disabled for the contest.

- The lawn and garden tractor used in the contest should be from 12 to 18 horsepower in size.
- The lawn and garden tractor must contain a middle-mounted mower deck.
- The drive mechanism running the mower deck must be disconnected by a judge prior to the contest.
- It is strongly recommended that only one make and model of tractor be used on the driving course. Other sizes and makes of lawn and garden tractors may be used for the maintenance-safety and parts identification (if real parts are used instead of pictures) segments of the contest.
- The mower deck should extend out at least four (4) inches beyond the lawn and garden tractor's rear tire.
- The lawn and garden tractor should contain tractor-type front wheel steering.
- The lawn and garden tractor should contain a right-hand or rear discharge mower deck.

## **C. WRITTEN EXAMINATION**

- Questions for the Beginner, Junior and Senior Division written examinations are taken from Supplement #3, "Questions and Answers for Lawn and Garden Tractor Operators."

- The written exam contains 25 questions.
- Each question is worth 20 points. A total of 500 penalty points are possible.
- Each contestant is given a maximum of 20 minutes to complete the exam.

#### **D. PARTS IDENTIFICATION**

**Note:** Pictures may be used in place of actual parts.

- Twenty-five (25) items consisting of: lawn and garden tractor and equipment parts and supplies are tagged with a number.
- Contestants identify the tagged items by writing the part's identification number next to the part's name on the scorecard.
- Beginner and Junior Division contestants use the Junior Division Lawn and Garden Tractor Parts Identification scorecard on page 36.
- Senior Division contestants use the Senior Division Lawn and Garden Tractor Parts Identification scorecard on page 37.
- Each part incorrectly identified results in a 20-point penalty. A total of 500 penalty points are possible. (Only one penalty per tagged part.)
- A time limit of 20 minutes is imposed.

#### **E. MAINTENANCE SAFETY CHECK**

- A maximum of five (5) missing or loose parts will be identified by senior contestants. Beginner and Junior contestants will identify a maximum of three (3) missing or loose parts.
- Contestants will be told on contest day how many parts there are.
- The loose or missing parts must be the same for all contestants.
- The maintenance/safety check should be conducted in a secluded area out of sight of the other contestants.
- Only one contestant at a time should be administered the maintenance/safety check.

#### **F. OBSTACLE STICK**

The purpose of the obstacle stick is to emphasize that lawn and garden tractor operators must constantly be alert for foreign objects in their pathway.

- An obstacle stick is placed, by one of the judges, at some point in Obstacle 3.

- The obstacle stick should be placed after the contestant has started through Obstacle 1 but before he/she has proceeded more than halfway through Obstacle 1.
- The obstacle stick used should be similar to a 2" by 4" board 1 to 2 feet in length.
- The contestant is expected to stop within two (2) feet of the obstacle stick, set the brakes or place the transmission in "PARK," disengage the mower's blade, dismount the lawn and garden tractor, and remove the obstacle stick and hand it to a judge. Failure to stop within two (2) feet results in a penalty as outlined in the score sheet.
- Hitting or running over the obstacle stick results in a 50-point penalty.

#### **G. STOP-STAKE AND MEASUREMENT STAKE**

- The stop-stake is a stake positioned distance "C" in front of Obstacle 4. (For dimension "C," see the Lawn and Garden Tractor Obstacle Course Diagram.)
- The stop-stake should be 1 1/2 times distance "A" from the inside wall of Obstacle 3. (For dimension "A," see the Lawn and Garden Tractor Obstacle Course Diagram.)
- The measurement stake is a stake located in the middle, rear of Obstacle 4.
- The stop-stake and measurement stake should be at least six (6) inches taller than the tractor's front hood. (Suggestion: five (5) feet or taller)

#### **H. TIME**

- *Start Time*

Beginner Division - Time officially begins when the lawn and garden tractor's *front axle* crosses the "start line" (line that extends across the *front* of Obstacle 1).

Junior Division – Time officially begins when the lawn and garden tractor's *front axle* crosses the "start line" (line that extends across the *front* of Obstacle 1).

Senior Division – Time officially begins when the lawn and garden tractor's *rear axle* crosses the "start line" (line across the *rear* of Obstacle 1).

- *Stop Time*

Time officially stops when the contestant, after backing the lawn and garden tractor into Obstacle 4 (shed), signals (throws one hand and arm into the air) the official judges that he/she is done.

#### **I. CONTEST OPERATING PROCEDURE**

The diagrams for the Junior and Senior Division Obstacle Course (Section VII, J and K, pages 31 and 32) are to be used at the county, area, and state events. The courses should be driven in the manner indicated in the diagrams unless the official judges indicate otherwise.

**Note:** Obstacle 2 (semi-circle) should be set up such that the contestant is maneuvering the Lawn and Garden Tractor in a counter-clockwise direction (right to left) around the semi-circle.

- The contest course should always be driven by a non-contestant prior to the contest to identify any problems maneuvering the course.
- The contestant, with the safety judge present, performs a safety and maintenance check of the lawn and garden tractor.
- The contestant mounts the lawn and garden tractor and starts the engine.
- Start time

Beginner Division - Time starts when the lawn and garden tractor's *front* axle crosses the Junior Division course "start line" (line that extends across the *front* of Obstacle 1 – serpentine).

Junior Division – Time starts when the lawn and garden tractor's *front* axle crosses the Junior Division course "start line" (line that extends across the *front* of Obstacle 1 – serpentine).

Senior Division – Time starts when the lawn and garden tractor's *rear* axle crosses the Senior Division course "start line" (line across the *rear* of Obstacle 1 – serpentine).

- Beginner and Junior Divisions – All contestants must enter Obstacle 1 on the left hand side. The contestant then drives through the obstacle course as outlined in the Obstacle Course Diagram on page 31. Failure to do so is scored as "Failure to follow instructions."

Note: For Beginner and Junior Divisions, the contestant's entire tractor must extend beyond the imaginary line at the end of Obstacle 3 before he/she may back out of the obstacle. Failure to do so is scored as "Failure to follow instructions."

- Senior Division – The contestant is to start through Obstacle 1 backing to the left side of the stake, then go forward through the serpentine using the opposite side to the left of the stake. The contestant then finishes the obstacle course as outlined in the Obstacle Course Diagram on page 32. Failure to do so is scored as "Failure to follow instructions."
- Scoring on Obstacle 2 "Semi-circle" is:
  - 10 points for every two-foot section of the semi-circle that the mower did not stay in the allowed 2 inches (maximum of 160 points).
  - If the mower is never within the allowed two inches, the contestant is penalized an additional 25 points for "Failure to follow instructions" (160 points + 25 points = 185 points).

- When the contestant comes upon the obstacle stick, he/she stops within two (2) feet of the stick, dismounts the lawn and garden tractor (engine left running, transmission in park, mower blade disengaged, etc.), and picks up the stick and hands it to an official judge.
- Stop-stake --- The contestant will signal the judge when they are ready for the measurement to be taken.
- When the contestant has the lawn and garden tractor positioned in Obstacle 4 (shed) to his/her satisfaction, the contestant signals (throws one hand and arm into the air) the official judge that he/she is done.
- The contestant dismounts the lawn and garden tractor (engine left running, transmission in park, check mower blade for disengagement, etc.).
- After the official judges have taken the measurements in Obstacle 4, the contestant mounts the lawn and garden tractor and returns it to the parking area.

# J. BEGINNER AND JUNIOR DIVISION LAWN TRACTOR OBSTACLE COURSE

A - Width of tractor plus 4-6 inches

B - 2 times length of tractor

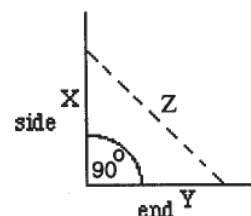
C - Length of tractor plus 10 feet

D -  $1\frac{1}{2}A$

**Note:** Dashed lines indicate backward travel

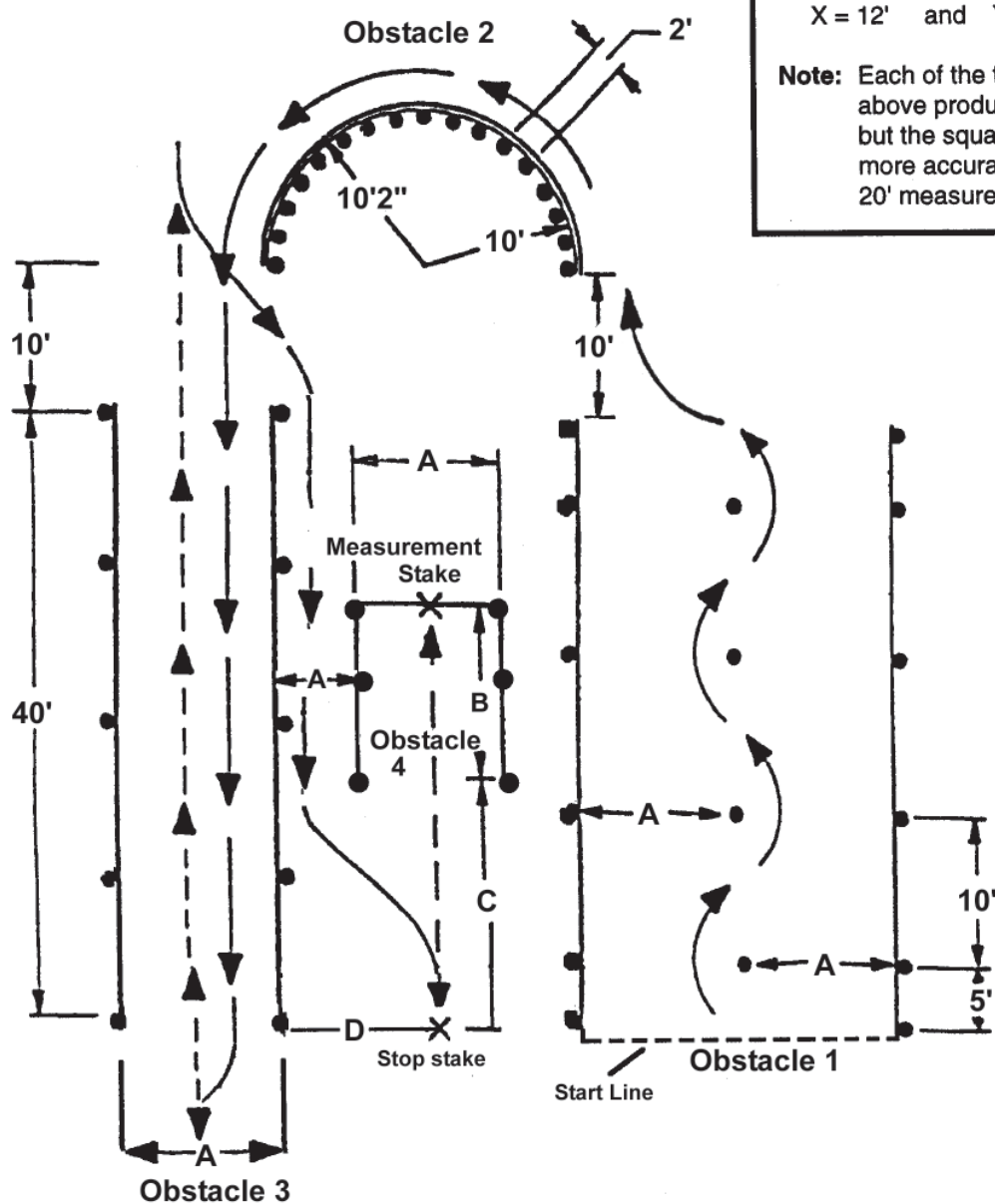
## Squaring Obstacles 1, 3, and 4

To square a corner, measure along the side and end of the corner as indicated below.



If  $X = 3'$  and  $Y = 4'$ , then  $Z = 5'$   
 If  $X = 6'$  and  $Y = 8'$ , then  $Z = 10'$   
 If  $X = 12'$  and  $Y = 16'$ , then  $Z = 20'$

**Note:** Each of the three squaring values above produces a square corner, but the squareness of the corner is more accurate with the 12', 16', and 20' measurements.



# K. SENIOR DIVISION LAWN TRACTOR OBSTACLE COURSE

A - Width of tractor plus 4-6 inches

B - 2 times length of tractor

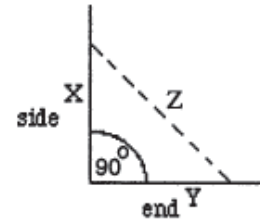
C - Length of tractor plus 10 feet

D -  $1\frac{1}{2}A$

**Note:** Dashed lines indicate backward travel

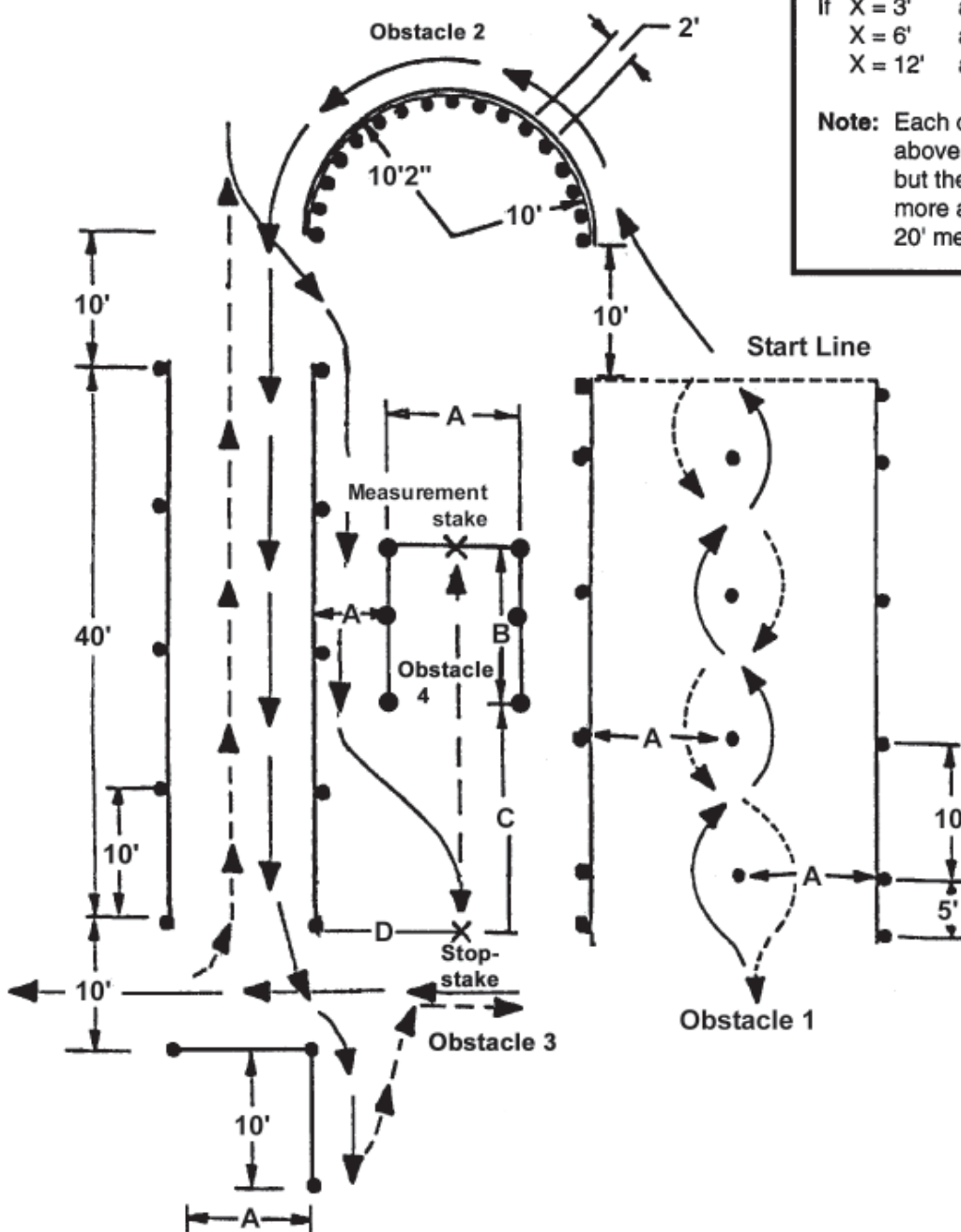
## Squaring Obstacles 1, 3, and 4

To square a corner, measure along the side and end of the corner as indicated below.



If  $X = 3'$  and  $Y = 4'$ , then  $Z = 5'$   
 If  $X = 6'$  and  $Y = 8'$ , then  $Z = 10'$   
 If  $X = 12'$  and  $Y = 16'$ , then  $Z = 20'$

**Note:** Each of the three squaring values above produces a square corner, but the squareness of the corner is more accurate with the 12', 16', and 20' measurements.



Contestant Name: \_\_\_\_\_ Contestant Number: \_\_\_\_\_

Division: \_\_\_\_\_ Beginner \_\_\_\_\_ Junior \_\_\_\_\_ Senior

County: \_\_\_\_\_ Score: \_\_\_\_\_

**LAWN TRACTOR SAFETY INSPECTION** *Scoring Sheet*

	NUMBER OF TIMES	PENALTY POINTS
<b>PRESTART CHECK</b> ( <i>Report each to safety judge</i> )		
1. Failure to check fuel level	(25)	_____
2. Failure to check oil level	(25)	_____
3. Failure to observe tire inflation	(25)	_____
4. Failure to observe loose or missing parts (each part)	_____ X 25	_____
5. Failure to check mower blade for disengagement	_____ (25)	_____
<b>STARTING SAFELY</b>		
1. Failure to check neutral position	_____ X 25	_____
2. Failure to disengage clutch while starting engine	_____ X 50	_____
<b>DRIVING SAFELY</b>		
1. Failure to engage clutch gently	_____ X 25	_____
2. Failure to ride on seat	_____ X 100	_____
3. Skidding or spinning tractor wheels (scuffing of inside wheel on turning does not count as a skid). Skid of the front tractor wheel is not counted until the skid equals or is greater than the width of the tire.	_____ X 50	_____
<b>DISMOUNTING SAFELY</b>		
1. Failure to set brakes before dismounting transmission set in park or locked position counts as brakes locked.	_____ X 50	_____
2. Failure to bring tractor to complete stop before dismounting.	_____ X 100	_____
3. Failure to check mower blade for disengagement before dismounting.	_____ X 50	_____
4. Failure to mount/dismount on side opposite the discharge chute.	_____ X 100	_____
<b>OTHER SAFETY</b>		
1. Smoking	_____ X 100	_____
2. Extra Riders	_____ X 100	_____
3. Other unsafe practices (_____)	_____ X 100	_____

Contestant Name: \_\_\_\_\_ Contestant Number: \_\_\_\_\_

Division: \_\_\_\_\_ Beginner \_\_\_\_\_ Junior \_\_\_\_\_ Senior

County: \_\_\_\_\_ Score: \_\_\_\_\_

### LAWN TRACTOR OPERATION *Scoring Sheet*

	NUMBER OF TIMES	PENALTY POINTS
Written Examination: Number of questions missed or omitted.	_____ X 20	_____
Parts Examination: Number of parts incorrectly identified	_____ X 20	_____
Safety Inspection: Total score from bottom of Safety Inspection scorecard		_____

#### GENERAL

1. Change of forward-backward direction to avoid hitting a marker or where not required. <b>Example:</b> If a contestant, originally moving forward, backs up (or vice-versa) to avoid hitting a marker and then continues through the course, one penalty is assessed.	_____ X 10	_____
2. Riding the clutch: continuously	_____ X 100	_____
on occasion	_____ X 10	_____
3. Grating of gears	_____ X 10	_____
4. Engine stalled or raced (clutching at high rpm)	_____ X 10	_____
5. Failure to follow instructions (_____)	_____ X 25	_____
6. Hitting or driving over Obstacle Stick	_____ (50)	_____

#### BOUNDARY AND STAKE INFRACTIONS

1. Driving over a boundary line or stake	_____ X 30	_____
2. Brushing stakes or boundary lines	_____ X 20	_____
3. Touching the measurement stake in Obstacle 4	_____ X 50	_____
4. Hitting or touching "STOP" stake	_____ X 50	_____

#### OBSTACLE 2 (SEMI-CIRCLE)

Contestants are penalized 10 points for every 2-foot section of circle that the mower did not stay in the allowed 2 inches.

Number of 2-foot sections that mower did not stay in the allowed 2 inches	_____ X 10	_____
---	------------	-------

**Note:** If the mower is never within the allowed 2 inches, the contestant is penalized an additional 25 points for "Failure to follow instructions."

#### MEASUREMENTS

1. Failure to stop within 2 feet of obstacle stick (# of inches over 2 feet). <b>Note:</b> Any fraction of an inch counts as a full inch.	_____ X 2	_____
2. Inches the tractor's mower desk is off center in Obstacle 4.	_____ X 2	_____
<b>Note:</b> Any fraction counts as a full inch.		
3. Inches the tractor is over 2 inches from the rear of Obstacle 4.	_____ X 2	_____
<b>Note:</b> Any fraction counts as a full inch.		
4. Inches the tractor is over 2 inches from the stop-stake.	_____ X 2	_____
<b>Note:</b> Any fraction counts as a full inch.		

#### TIME

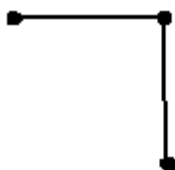
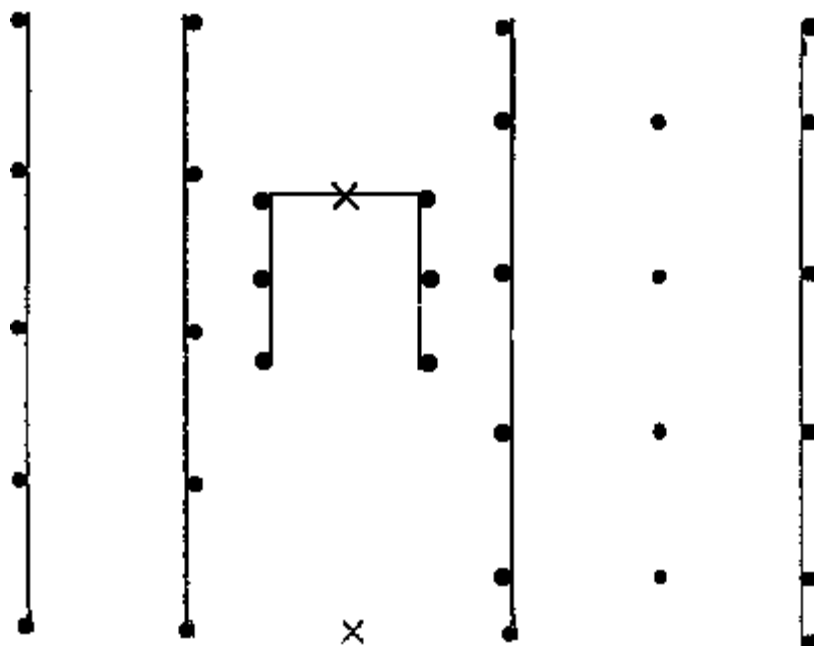
1. Minutes _____ Seconds _____	Total Seconds _____ X 1	_____
2. Exceeding eight (8) minutes	400 points	

**TOTAL PENALTY POINTS** = \_\_\_\_\_  
**TOTAL SCORE** = \_\_\_\_\_

Directions: Indicate each driving infraction (penalty) by placing the letter (B, O, S, C) that corresponds to that particular penalty at the point on the course where the infraction occurred.

- B = Brushing stake or boundary
- O = Over boundary
- S = Outside two-inch margin when moving around Obstacle 2.
- C = Change of Direction

**Note:** Maximum of one penalty per two-foot section.



Beginner Division \_\_\_\_\_

Junior Division \_\_\_\_\_

Contestant Number \_\_\_\_\_

County \_\_\_\_\_

Contestant Name \_\_\_\_\_

Score \_\_\_\_\_

## LAWN TRACTOR PARTS IDENTIFICATION

### Scoring Sheet

Parts to be identified have numbers attached to them. Select the correct part name from this list. Write the corresponding number beside the part name. Each *tagged* part incorrectly identified results in a twenty (20) point penalty. A total of 500 penalty points are possible. (Only one penalty per tagged part.) Time limit = 20 minutes.

- |                                  |                                 |
|----------------------------------|---------------------------------|
| _____ 6 Point Socket             | _____ Lawn Mower Wheel          |
| _____ Air Filter Element         | _____ Mower Deck                |
| _____ Alternator                 | _____ Mower Height Adjuster     |
| _____ Amber Light                | _____ Muffler                   |
| _____ Anti-freeze/Coolant Tester | _____ Oil Dipstick              |
| _____ Ball Bearing               | _____ Oil Filler Cap            |
| _____ Ball Joint/Rod End         | _____ Personal Safety Device(s) |
| _____ Brake Pedal                | _____ Phillips Screwdriver      |
| _____ Combination Wrench         | _____ Rear Tire                 |
| _____ Crowfoot Wrench            | _____ Reflector                 |
| _____ Discharge Chute            | _____ Roller Chain              |
| _____ Drain Plug                 | _____ Rotary Mower Blade        |
| _____ Edger Blade                | _____ Slotted Screwdriver       |
| _____ Fire Extinguisher          | _____ Spark Plug                |
| _____ Front Tire                 | _____ Spark Plug Wire           |
| _____ Fuel Fill Cap              | _____ Tail Light                |
| _____ Fuel Filter                | _____ Throttle Control Lever    |
| _____ Fuel Tank                  | _____ Tire Tube                 |
| _____ Fuse                       | _____ Torx Screwdriver          |
| _____ Grass Clippers             | _____ Universal Joint           |
| _____ Headlight                  | _____ Valve Core                |
| _____ Hose Nozzle                | _____ Valve Stem                |
| _____ Hydraulic Control Levers   | _____ V-Belt Pulley             |
| _____ Ignition Switch            | _____ Warning Label             |
| _____ Kill Switch                | _____ Wheel Lug Bolt            |

Contestant Number \_\_\_\_\_

County \_\_\_\_\_

Contestant Name \_\_\_\_\_

Score \_\_\_\_\_

**LAWN TRACTOR PARTS IDENTIFICATION** *Scoring Sheet*

Parts to be identified have numbers attached to them. Select the correct part name from this list. Write the corresponding number beside the part name. Each *tagged* part incorrectly identified results in a twenty (20) point penalty. A total of 500 penalty points are possible. (Only one penalty per tagged part.) Time limit = 20 minutes.

- |                                   |                                   |                              |
|-----------------------------------|-----------------------------------|------------------------------|
| _____ 6 Point Socket              | _____ Front Axle                  | _____ Radiator Cap           |
| _____ Air Box Cover               | _____ Front Tire                  | _____ Rear Tire              |
| _____ Air Cleaner Housing         | _____ Fuel Fill Cap               | _____ Reflector              |
| _____ Air Filter Element          | _____ Fuel Filter                 | _____ Roller Chain           |
| _____ Air Filter Precleaner       | _____ Fuel Pump                   | _____ Rotary Blade Adapter   |
| _____ Alternator                  | _____ Fuel Tank                   | _____ Rotary Mower Blade     |
| _____ Amber Light                 | _____ Fuse                        | _____ Sleeve Bearing         |
| _____ Anti-freeze/Coolant Tester  | _____ Gear                        | _____ Slotted Screwdriver    |
| _____ Ball Bearing                | _____ Grass Clippers              | _____ Spark Plug             |
| _____ Ball Joint/Rod End          | _____ Headlight                   | _____ Spark Plug Wire        |
| _____ Brake Pedal                 | _____ Hose Nozzle                 | _____ Sprocket               |
| _____ Camshaft                    | _____ Hydraulic Control           |                              |
| _____ Carburetor                  | Lever(s) _____ Hydraulic Hose     | _____ Starter                |
| _____ Castor Gauge Wheel          | _____ Idler Pulley                | _____ Starter Solenoid       |
| _____ Choke Control Lever Bearing | _____ Ignition Switch             | _____ Tail Light             |
| _____ Coil                        | _____ Kill Switch                 | _____ Tapered Roller         |
| _____ Combination Wrench          | _____ Lawn Mower Wheel            | _____ Throttle Control Lever |
| _____ Connecting Rod              | _____ Lawn Sprinkler Head         | _____ Tie Rod End            |
| _____ Crowfoot Wrench             | _____ Mower Deck                  | _____ Tire Tube              |
| _____ Cruise Control Set Lever    | _____ Mower Height Adjuster       | _____ Torx Screwdriver       |
| _____ Discharge Chute             | _____ Muffler                     | _____ Transmission Filler    |
| _____ Distributor                 | _____ Needle Bearing              | _____ Universal Joint        |
| _____ Drain Plug                  | _____ Oil Dipstick                | _____ Valve                  |
| _____ Dump Valve Release          | _____ Oil Filler Cap              | _____ Valve Core             |
| _____ Edger Blade                 |                                   | _____ Valve Cover            |
| _____ Engine Oil Filter           | _____ Parking Brake Control Lever | _____ Valve Spring           |
| _____ Fire Extinguisher           | _____ Personal Safety Device(s)   | _____ Valve Stem             |
| _____ Flat Belt                   | _____ Phillips Screwdriver        | _____ V-Belt                 |
|                                   | _____ Piston                      | _____ V-Belt Pulley          |

\_\_\_\_\_ Flywheel

\_\_\_\_\_ Piston Rings

\_\_\_\_\_ Warning Label

\_\_\_\_\_ Forward/Reverse Pedals

\_\_\_\_\_ PTO Control Lever

\_\_\_\_\_ Water Pump

\_\_\_\_\_ Wheel Lug Bolt