

# Formula 1

Research Report: Understanding Formula 1 Grand Prix Days



# What is F1: Teamwork

As the highest class of international racing for single-seater formula racing cars, Formula 1 is the pinnacle of motorsport and the world's most prestigious motor racing competition. There really is nothing like it. It's a team sport (it needs to be to change all 4 tyres on a car in under 2 seconds!), but the drivers are more like fighter pilots than sportspeople. Battling extreme g-forces, making daring decisions in the blink of an eye – and at 370km/h. To be the best, F1 drivers push themselves – and their incredibly innovative machines – to the very limit.



# Understanding F1 for our

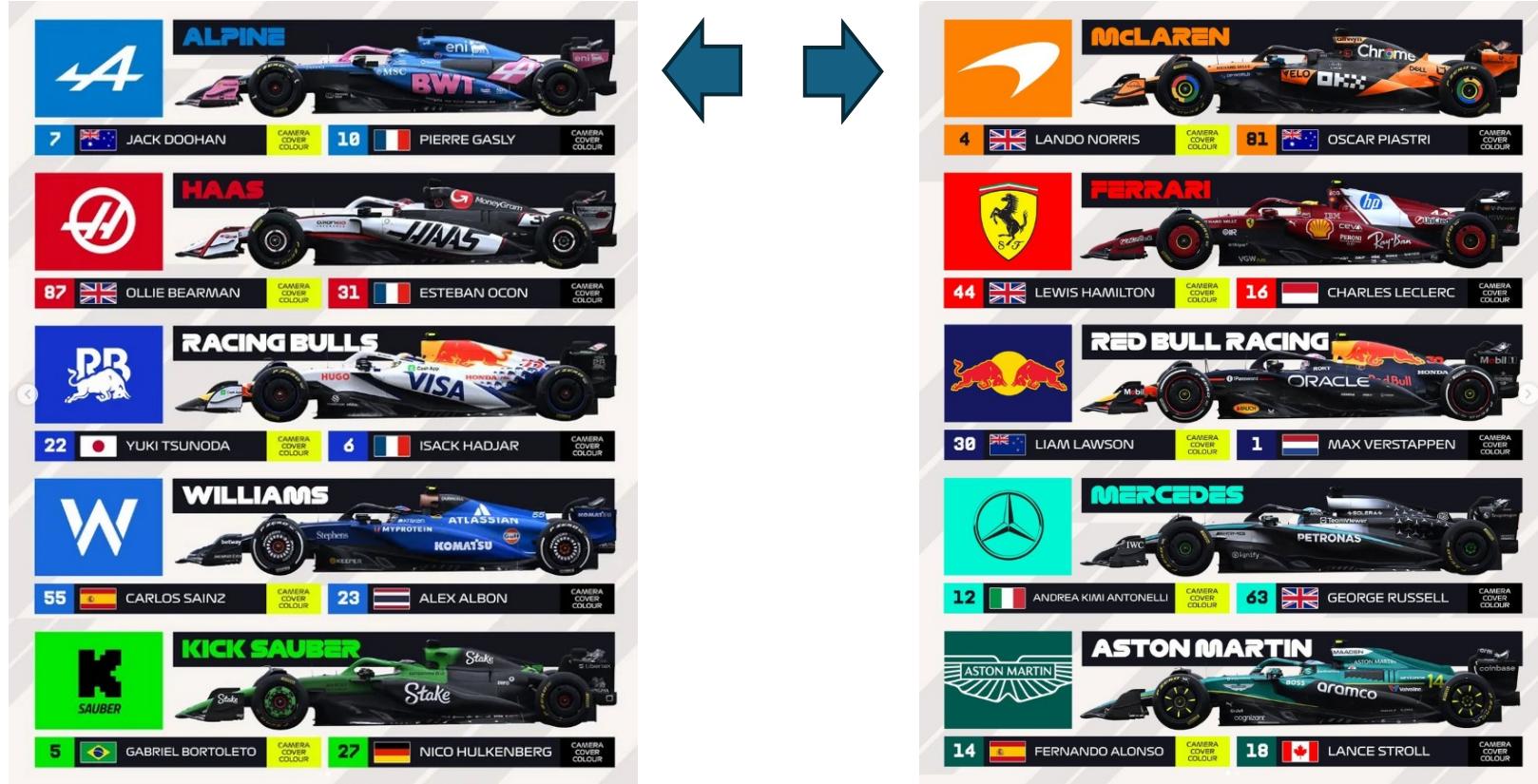
## topic

Formula 1, inaugurated in 1950, is the world's premier single-seater racing series, with Grand Prix events held globally across a season from February to December. A standard Grand Prix weekend unfolds over three days, each with distinct objectives: practice, qualifying, and the race itself. This report investigates the operational and strategic significance of these days, providing a comprehensive overview for enthusiasts and researchers alike.

Formula 1 (2025) Home F1.com. <https://www.f1.com/>



# F1 Teams 2025



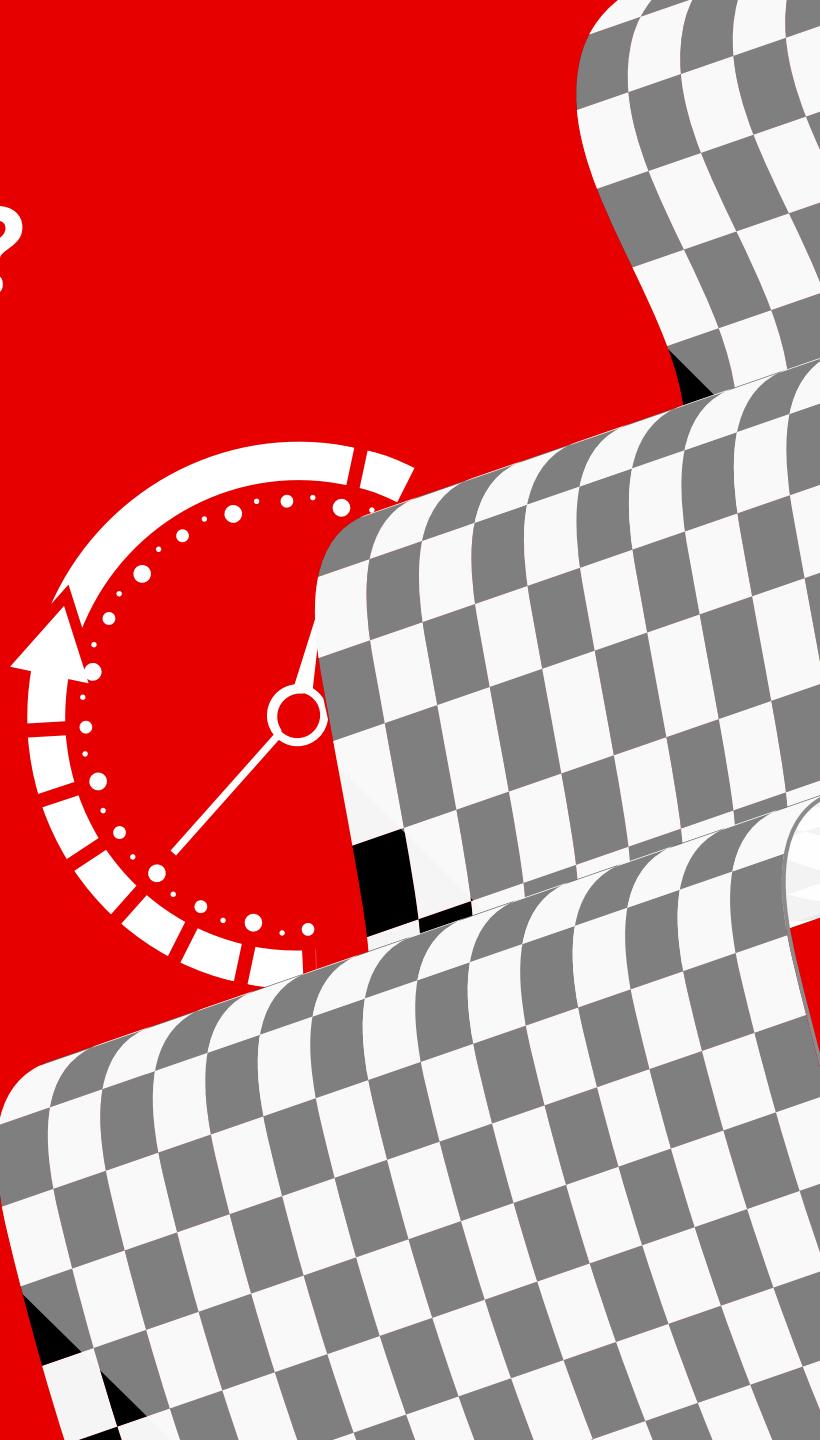
Alpine  
Haas  
Racing Bulls  
Williams  
Kick Sauber

McLaren  
Ferrari  
Red Bull Racing  
Mercedes  
Aston Martin

# How long do F1 races last?

- Formula 1 races generally last between an hour-and-a-half and two hours, though this can be impacted by Safety Car periods that slow the field down or red flags that halt the action – see the 2023 Australian Grand Prix as a prime example.
- Each race on the calendar has a set number of laps based on the length of their circuit. The distance of every race is almost always equal to the fewest number of laps that exceed 305 kilometers.

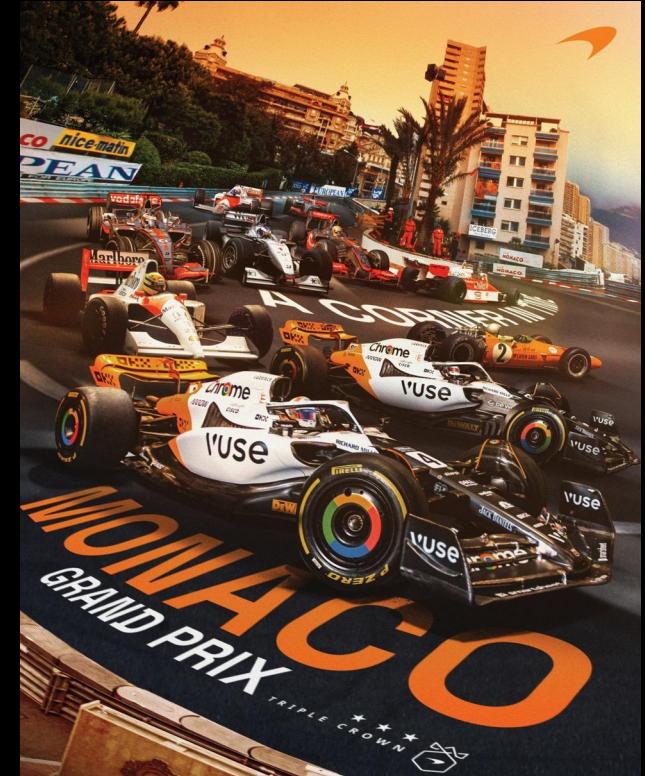
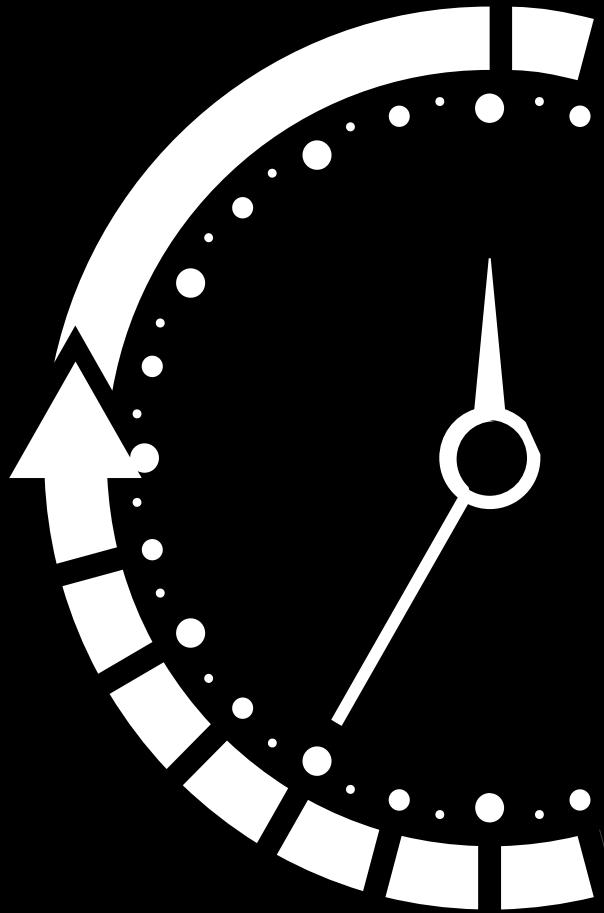
★Monaco is an exception to the rule, where the race length is equal to the fewest number of laps needed to exceed a distance of 260km, given the lower speeds of its street circuit nature.



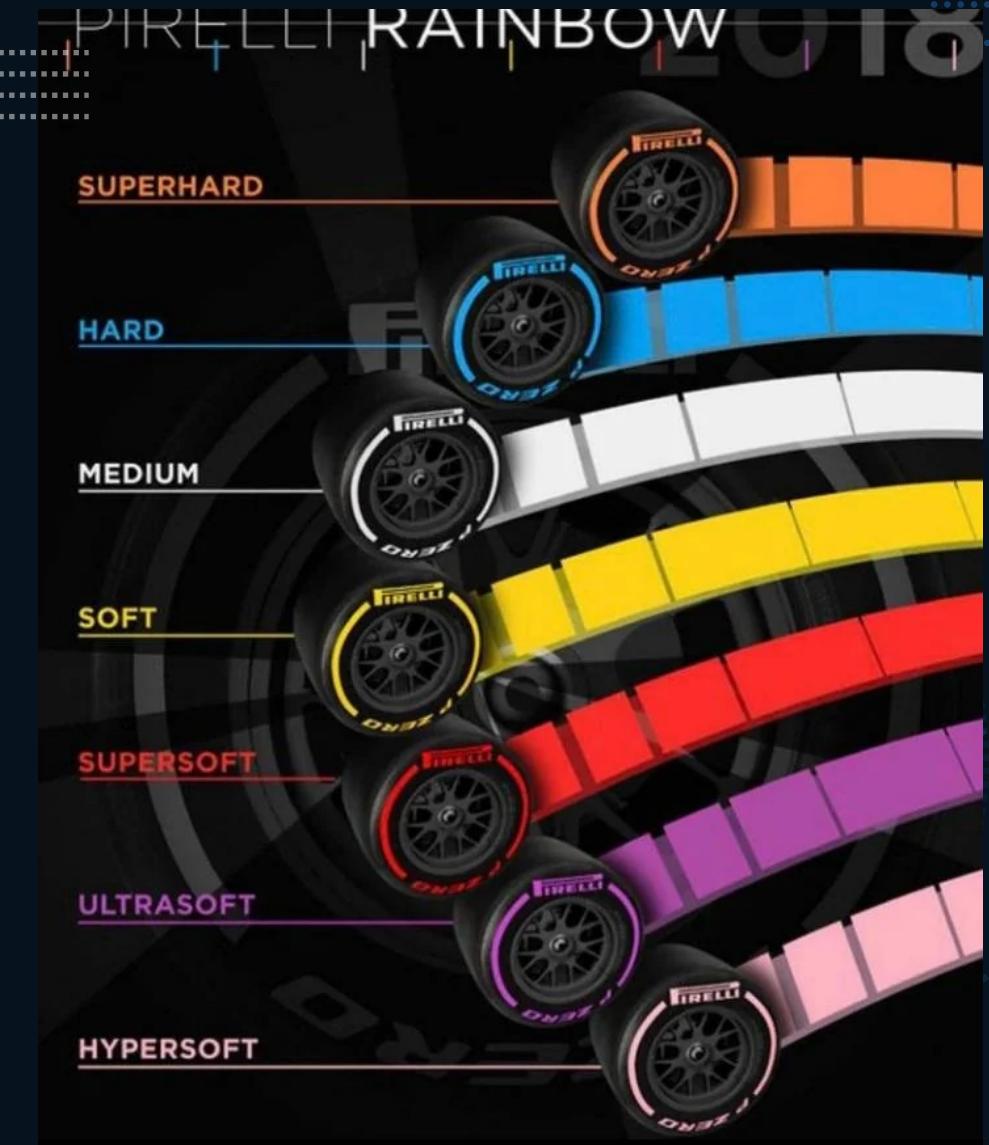
# Monaco Grand Prix Laps

Race length 260.286 km  
(161.734 miles)

Laps 78



# Before we move...





SOFT

Short-lived  
Fastest  
Speed



MEDIUM

Balance  
d



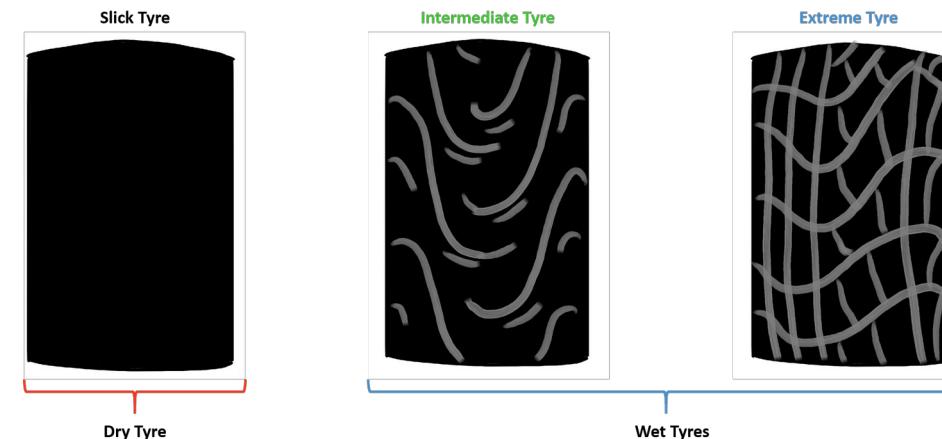
HARD

Long lasting  
Slowest  
Speed

## Three Most Used Tyres

Pirelli. (2025). *Formula 1 tyres*. Pirelli.com. <https://pirelli.com/tires/en-us/motorsport/f1>

# Rain Tyres



Pirelli. (2025). *Formula 1 tyres*. Pirelli.com. <https://elli.com/tires/en-us/motorsport/f1>

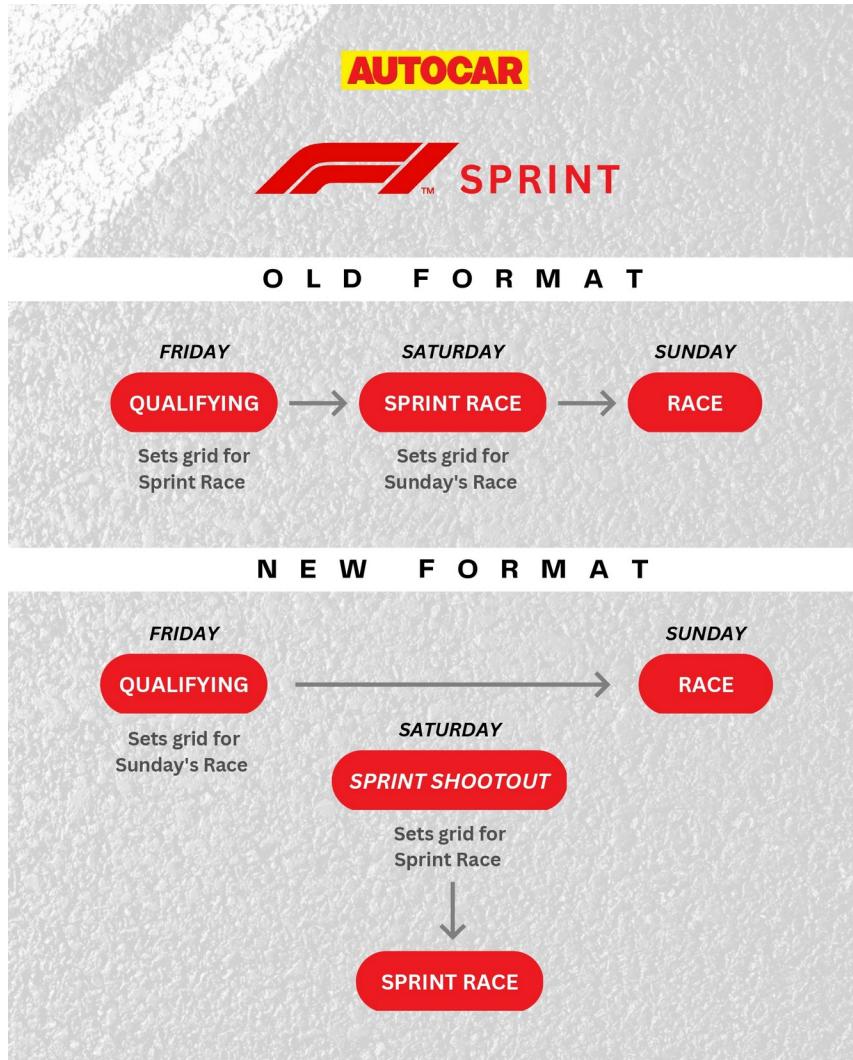
A close-up photograph of a Formula 1 race car's front wheel and suspension system. The wheel is black with a prominent tread pattern, mounted on a silver multi-spoke hubcap. Above the wheel, the car's red and black front wing and sidepods are visible. The background is blurred, suggesting speed.

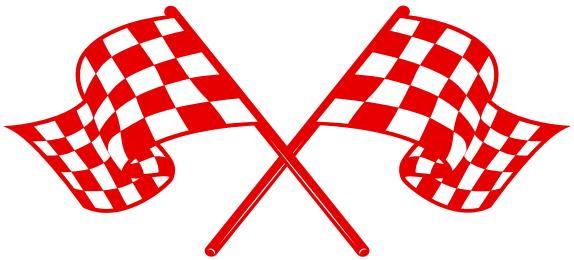
# Explaining Old and New Formats Of F1

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# Formats of F1 OLD AND NEW





# What is Sprint Format New Format

## WHAT IS **SPRINT SHOOTOUT?**

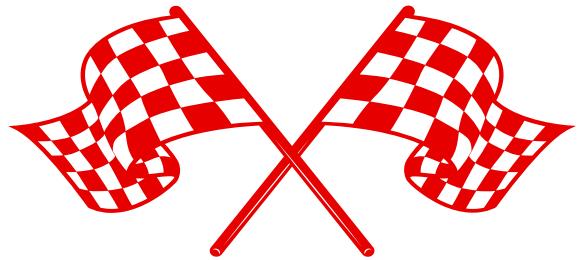


**THREE-PART SESSION  
TO SET THE GRID FOR  
SATURDAY'S F1 SPRINT**

## **GRAND PRIX QUALIFYING**

THE FRIDAY AFTERNOON  
QUALIFYING SESSION  
NOW SETS THE GRID FOR  
SUNDAY'S GRAND PRIX

SATURDAY'S SHOOTOUT AND  
SPRINT DO NOT AFFECT  
THE STARTING ORDER FOR  
SUNDAY'S GRAND PRIX



# What is Sprint Format

## New Format

**F1 SPRINT WEEKEND**

**FRIDAY**

- FP1  
60 minutes
- Sprint Qualifying  
Sets grid for F1 Sprint

**SATURDAY**

- F1 Sprint  
Points for top 8
- Qualifying  
Sets grid for Sunday's race

**SUNDAY**

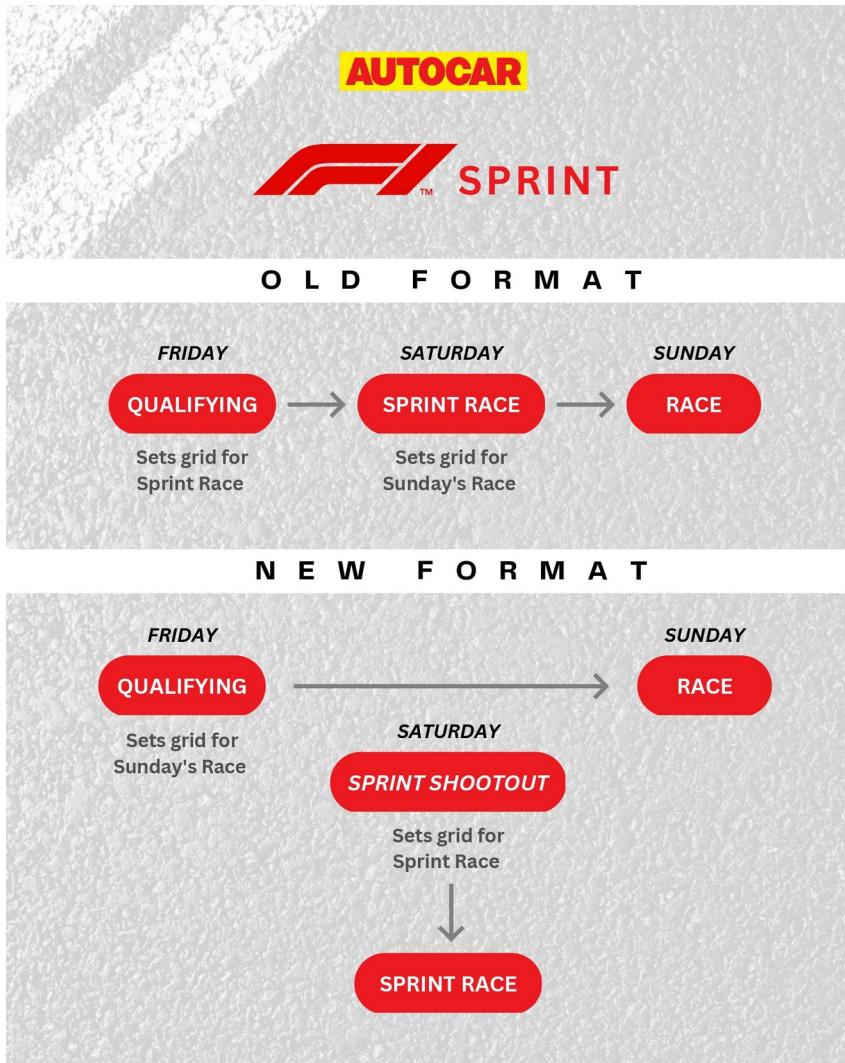
- Grand Prix  
Full distance race as normal

**SPRINT FORMAT**

- No mandatory pitstops in 100km dash (approx. 25-30 minute race).
- Winner gets eight points, points go down to one point for eighth place.
- Occurs before GP qualifying and race.



# Normal Weekend Old Format

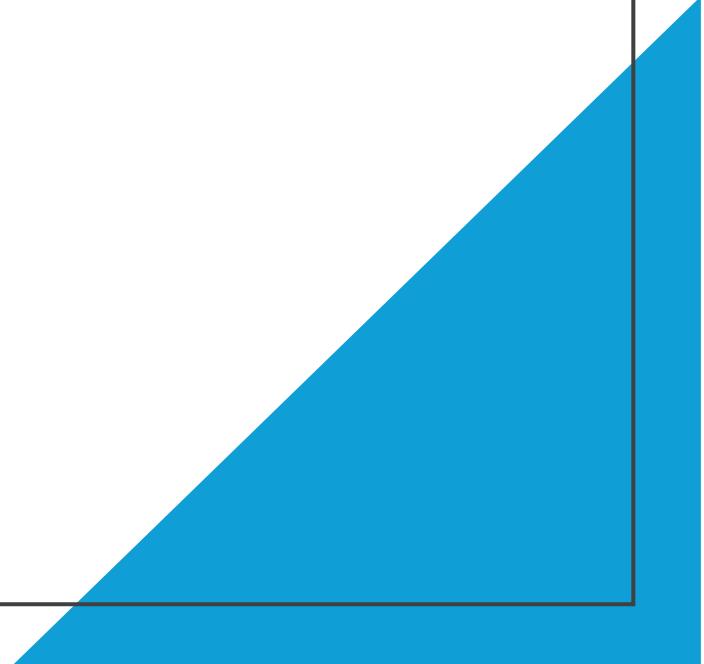




# Safety Cars

The safety car aims to enable the clearance of any obstruction under safer conditions, especially for marshals and/or awaiting more favorable track conditions weather-wise. By following the safety car, the competitors' tires remain as close as possible to operating temperature while their engines do not overheat.

**Now lets get  
into  
Weekends**



# Friday Day1: Practice Day

Friday marks the start of a Grand Prix weekend with two free practice sessions (FP1 and FP2), each lasting approximately one hour.

These sessions allow teams to test car setups, aerodynamics, and tire performance under race weekend conditions.

Drivers acclimate to the circuit, while engineers gather data from hundreds of sensors—sometimes generating terabytes of information—to optimize performance.

For example, night races like Singapore adjust this schedule, but the purpose remains: preparation and adaptation.

A high-resolution, close-up photograph of a Formula 1 race car's front wheel and suspension system. The tire is black with deep grooves, mounted on a silver multi-spoke alloy wheel. In the background, the metallic components of the suspension, including the shock absorber and control arms, are visible. The lighting is dramatic, highlighting the textures of the metal and rubber.

## Saturday Day2: Qualifying & Addons

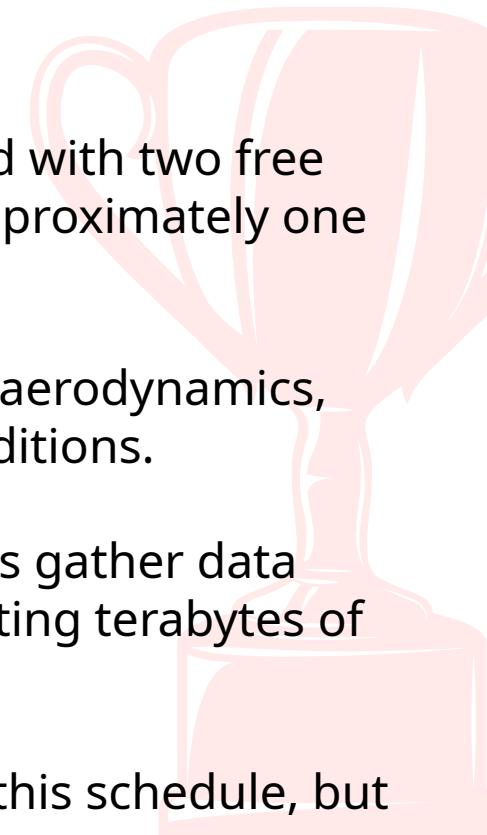
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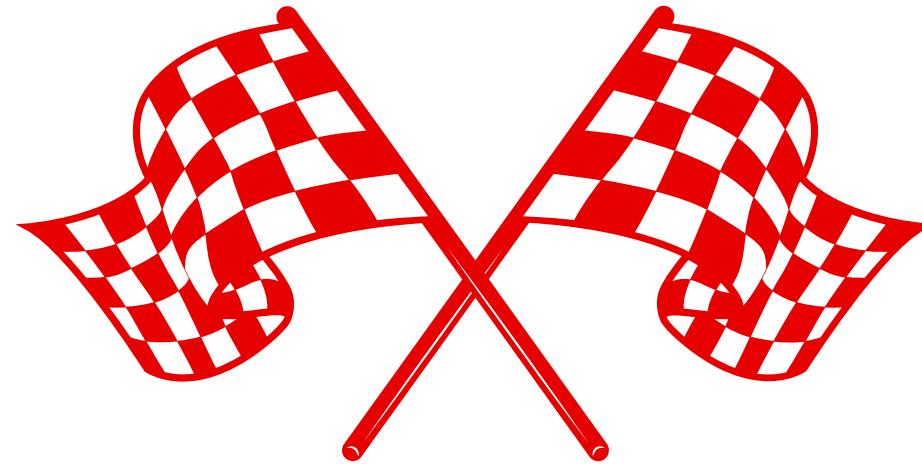
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# Sunday Final Grand Prix, Day 3

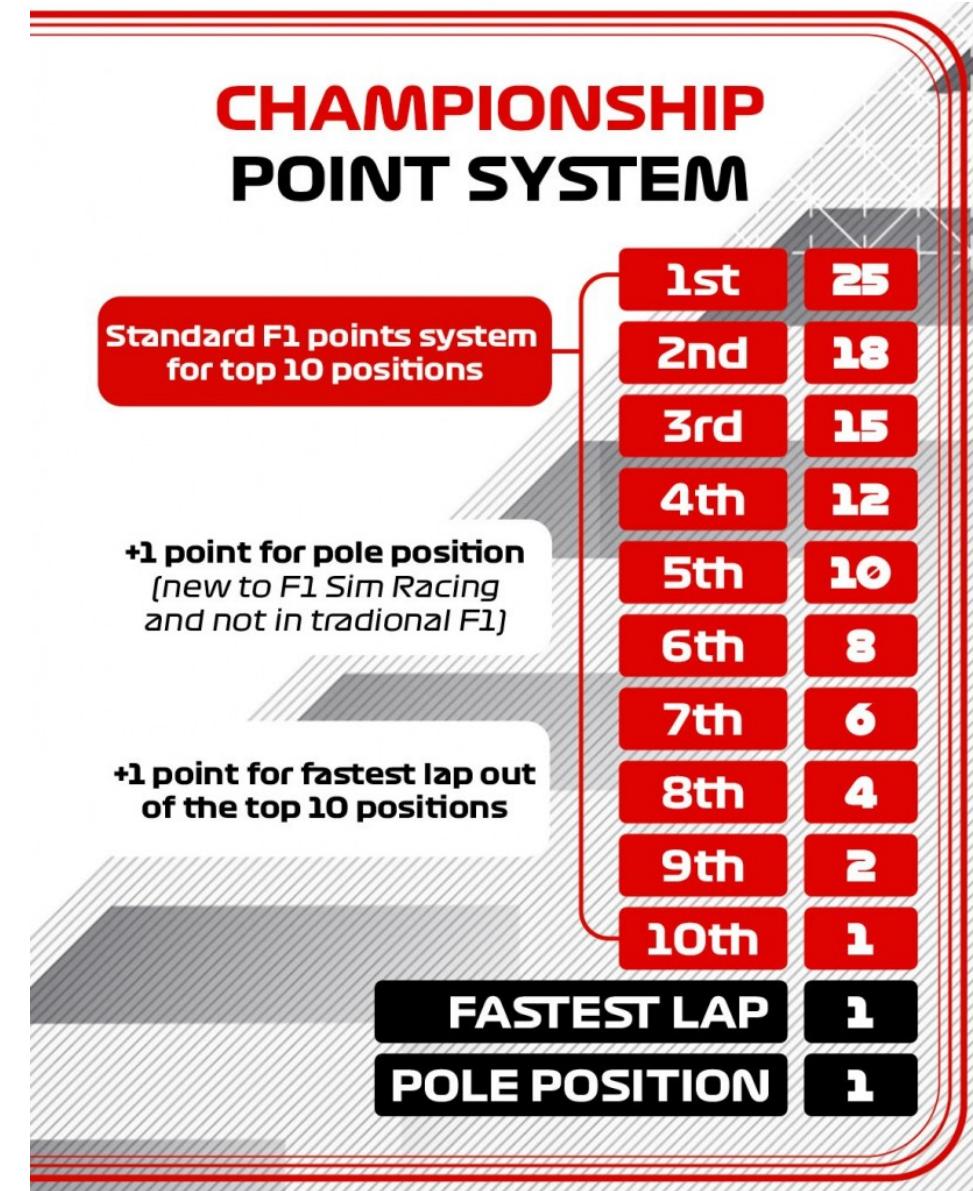
Sunday is the Grand Prix itself, typically starting in the afternoon (or evening for night races).

Preceded by reconnaissance laps for final checks, the race spans 305 kilometers or two hours, whichever comes first, barring exceptions like Monaco (260km).

Strategy—pit stops, tire choices, and overtaking—defines outcomes, with points awarded to the top ten finishers. This day encapsulates F1's blend of engineering precision and driver skill.



# Point System



# Penalty Points

PENALTY POINTS	
	REJOINING THE TRACK UNSAFELY 3 POINTS
	CAUSING A COLLISION 2 POINTS
	SPEEDING UNDER RED FLAG 2 POINTS
	OVERTAKING UNDER THE SAFETY CAR 2 POINTS
	FORCING ANOTHER DRIVER OFF TRACK 2 POINTS
	FALLING MORE THAN 10 LENGTHS BEHIND DURING SAFETY CAR PERIOD 2 POINTS
	FAILING TO SLOW UNDER YELLOW FLAGS 2 POINTS
	LEAVING THE TRACK WITHOUT REASON 1 POINT
	OUT OF POSITION AT START 1 POINT
	LEAVING THE TRACK AND GAINING AN ADVANTAGE 1 POINT
	IMPEDING 1 POINT
	IGNORING BLUE FLAGS 1 POINT
	MORE THAN ONE CHANGE OF DIRECTION TO DEFEND 1 POINT

# More on Field

## Conclusion

F1 Grand Prix days are a meticulously crafted sequence of preparation, competition, and climax, driving the sport's global appeal.

From Friday's technical groundwork to Sunday's high-stakes race, they showcase engineering ingenuity and human daring.

As F1 evolves, these days will likely adapt further, maintaining their core purpose: delivering the world's greatest racing spectacle.

## Discussion

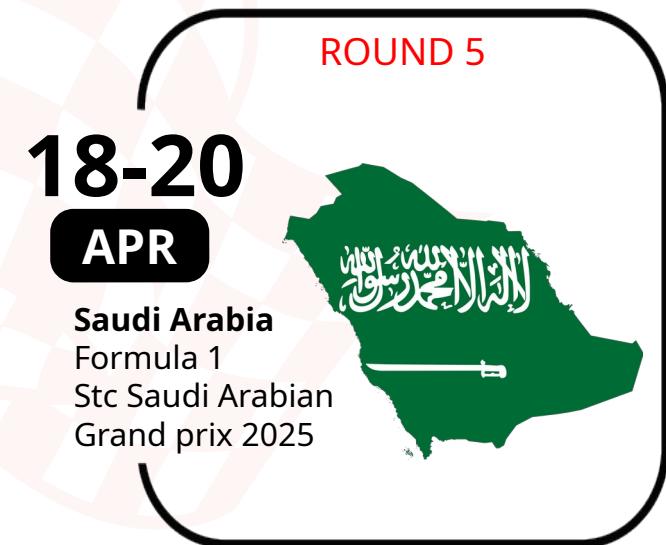
Each day serves a unique role: Friday builds the foundation, Saturday sets the stage, and Sunday delivers the spectacle.

Data-driven adjustments from practice inform qualifying strategies, while race day tests execution under pressure.

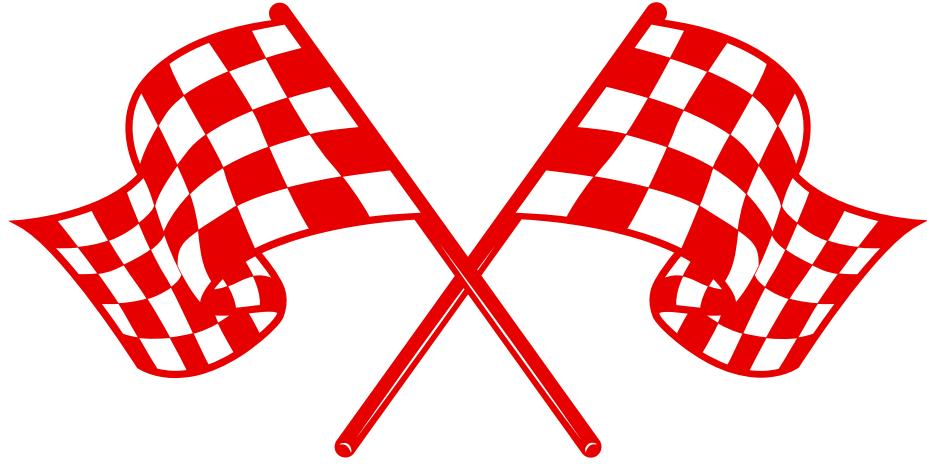
Sprints add complexity and excitement, though some argue they dilute traditional focus. This structure balances technical development with competitive fairness, underpinned by FIA regulations.

# F1 Schedule

2025 FIA FORMULA ONE WORLD CHAMPIONSHIP™  
**2025**



**Do not forget to wear your  
seatbelts and helmets while  
driving.**



Thank you

