

MONZA 2019

CURVE DI LESMO

CURVA DI SERRAGLIO

VARIANTE

SF

VARIANTE ASCARI

CURVA GRANDE

3

SF

14

15

16

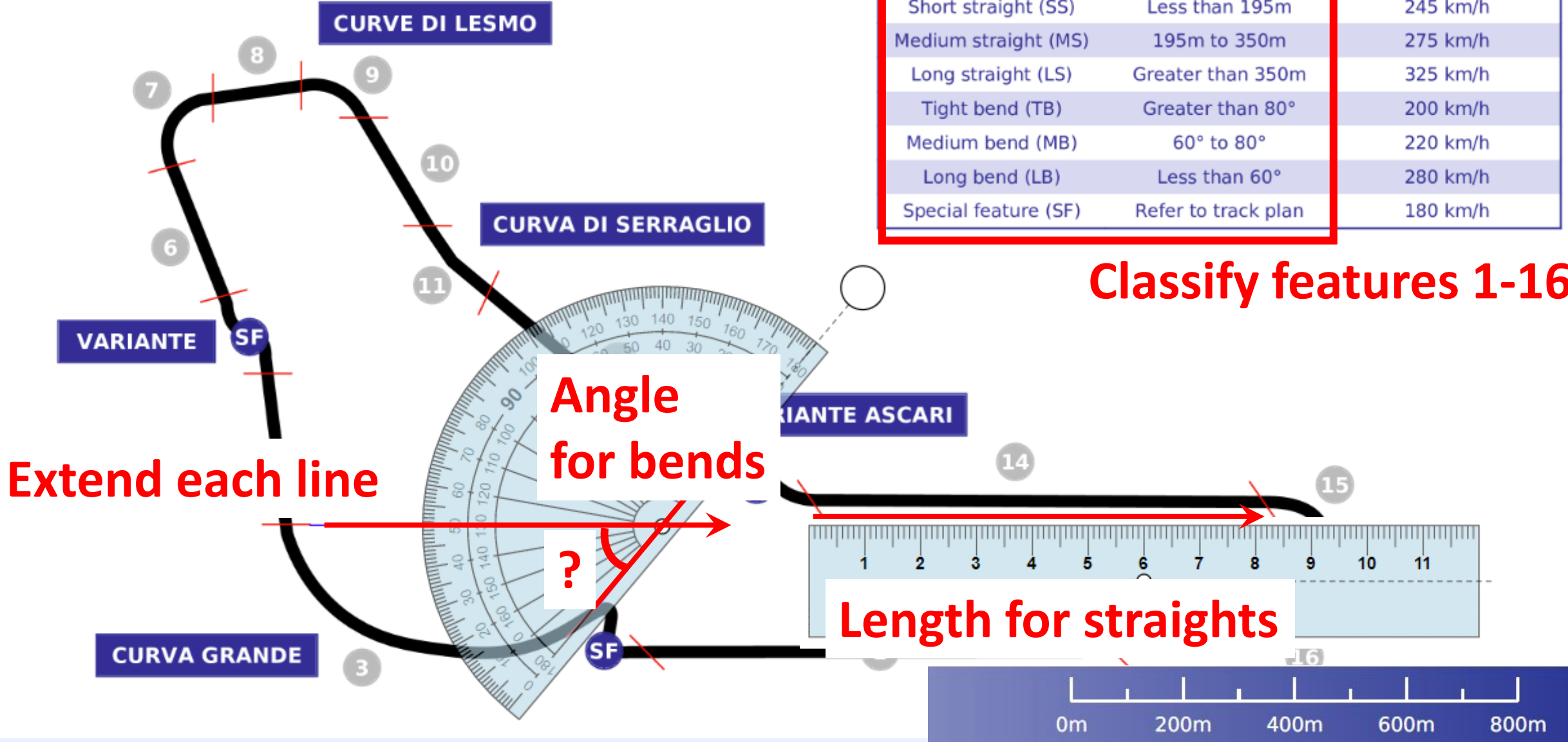
FEATURE CLASSIFICATION	FEATURE DEFINITION	MAXIMUM SAFE SPEED
Short straight (SS)	Less than 195m	245 km/h
Medium straight (MS)	195m to 350m	275 km/h
Long straight (LS)	Greater than 350m	325 km/h
Tight bend (TB)	Greater than 80°	200 km/h
Medium bend (MB)	60° to 80°	220 km/h
Long bend (LB)	Less than 60°	280 km/h
Special feature (SF)	Refer to track plan	180 km/h

Classify features 1-16

Extend each line

Angle for bends

Length for straights





TECHNICIAN'S PLANNING SHEET

FEATURE	Feature Measurement in ° for the bends in m for the straights		Feature Category Refer to the track plan (e.g. SS/TB/SF)	
	Estimated Measurement	Actual Measurement	Estimated Category	Actual Category
1	900m	800m	LS	LS
2				SF
3	70°	50°	MB	LB
4				
5				

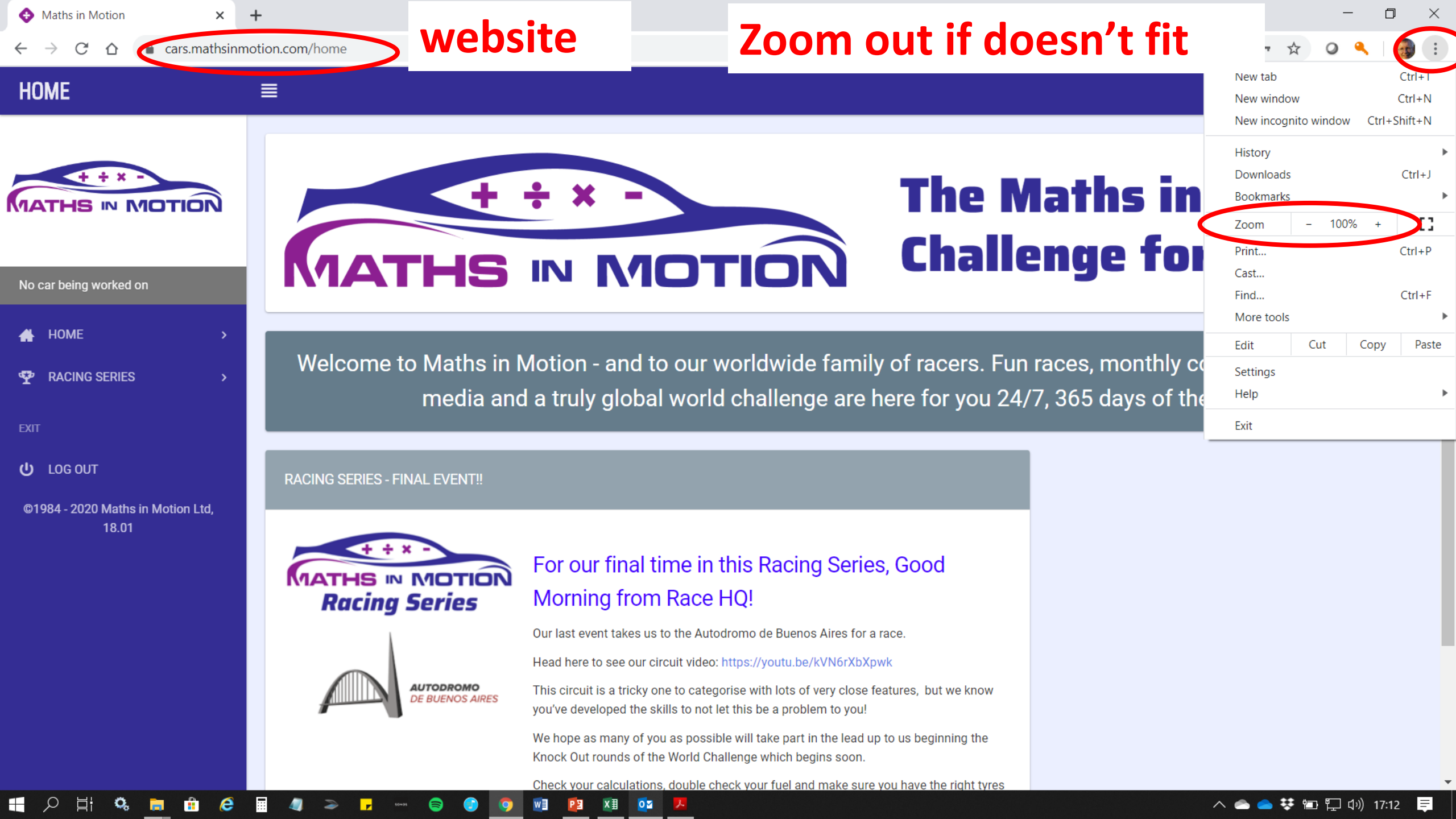
YOUR NAME	
TEAM NAME	
DRIVER TEMPERAMENT	

CIRCUIT	
COUNTRY	
DATE OF RACE	

PRACTICE LAP WEATHER

Estimate and measure each of the numbered features on the track and classify them. SS=short straight, MS=medium straight.....TB=tight bend, MB= medium bend.....etc

Also measure the total length of the track (string is useful).



Maths in Motion
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website

Zoom out if doesn't fit

Zoom - 100% +

HOME



The Maths in
Challenge for

No car being worked on

HOME

RACING SERIES

EXIT

LOG OUT

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18.01

Welcome to Maths in Motion - and to our worldwide family of racers. Fun races, monthly co media and a truly global world challenge are here for you 24/7, 365 days of the

RACING SERIES - FINAL EVENT!!



For our final time in this Racing Series, Good Morning from Race HQ!

Our last event takes us to the Autodromo de Buenos Aires for a race.
Head here to see our circuit video: <https://youtu.be/kVN6rXbXpwk>

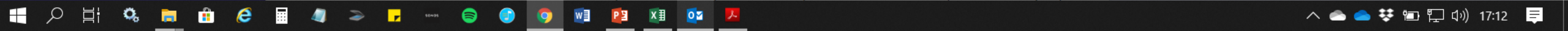


This circuit is a tricky one to categorise with lots of very close features, but we know you've developed the skills to not let this be a problem to you!

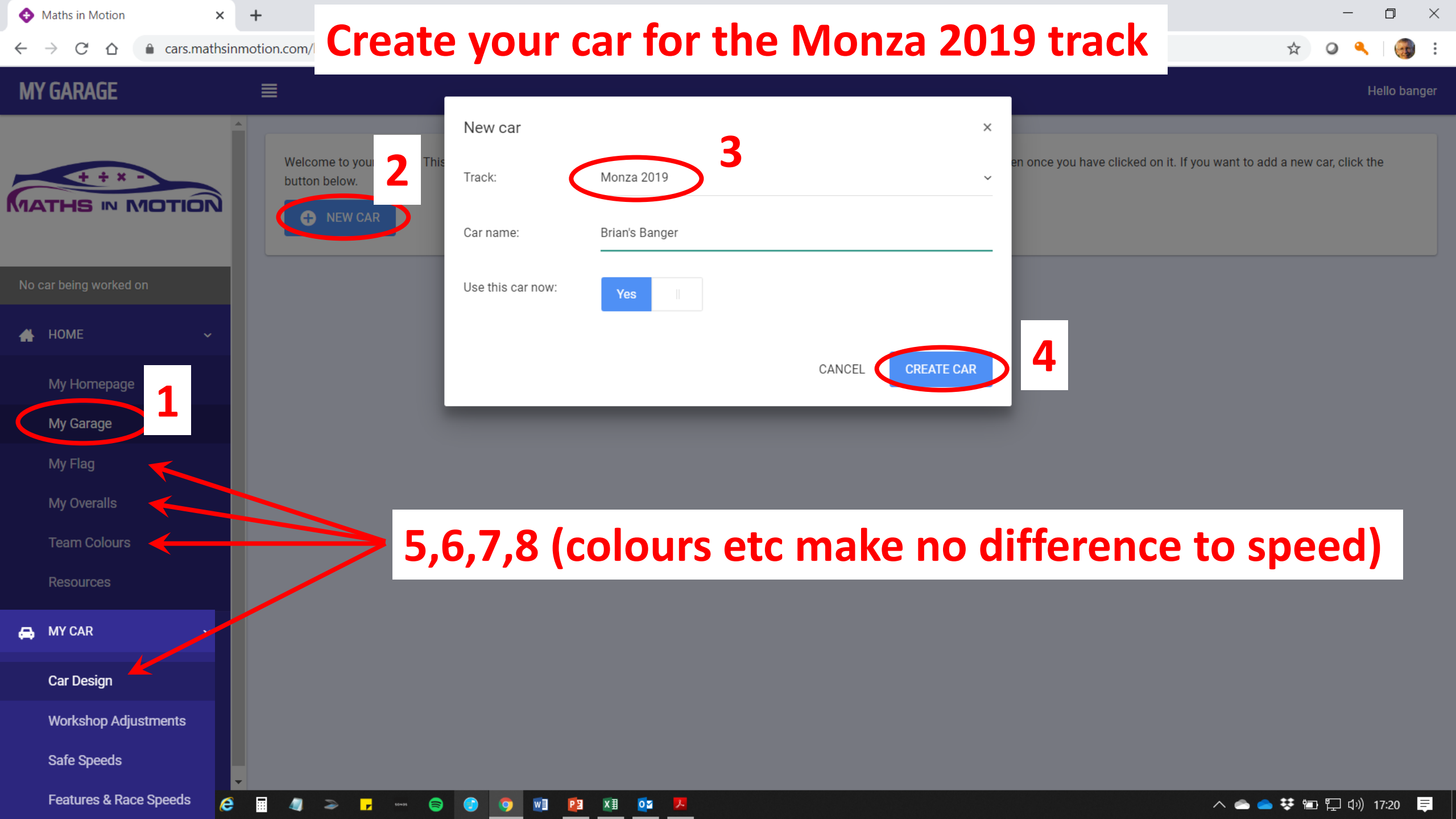
We hope as many of you as possible will take part in the lead up to us beginning the Knock Out rounds of the World Challenge which begins soon.

Check your calculations, double check your fuel and make sure you have the right tyres

- New tab Ctrl+I
- New window Ctrl+N
- New incognito window Ctrl+Shift+N
- History
- Downloads Ctrl+J
- Bookmarks
- Zoom - 100% +
- Print... Ctrl+P
- Cast...
- Find... Ctrl+F
- More tools
- Edit Cut Copy Paste
- Settings
- Help
- Exit



Create your car for the Monza 2019 track



1

2

3

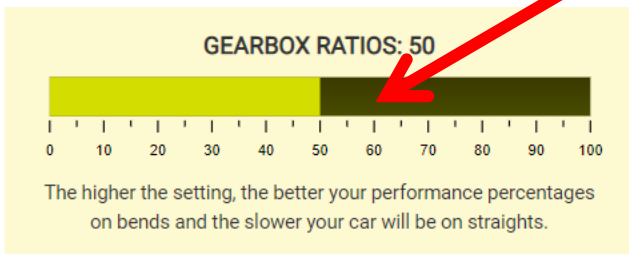
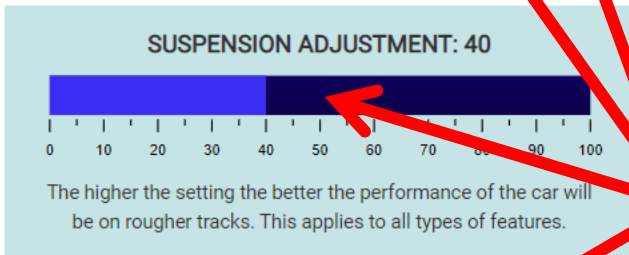
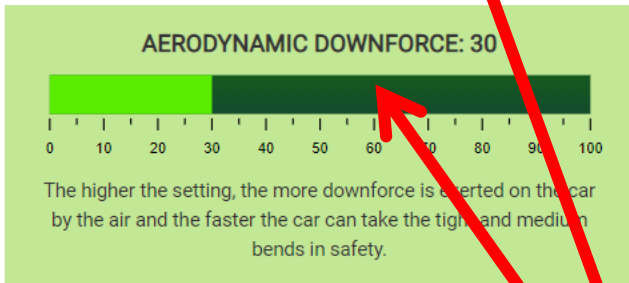
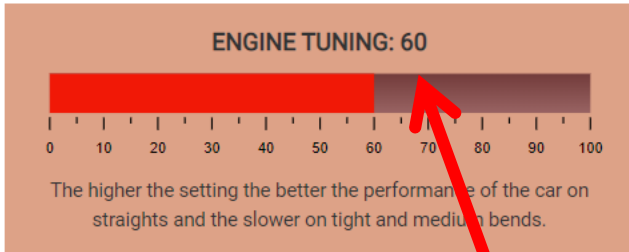
4

5,6,7,8 (colours etc make no difference to speed)

Workshop adjustments make your car as efficient (fast) as possible



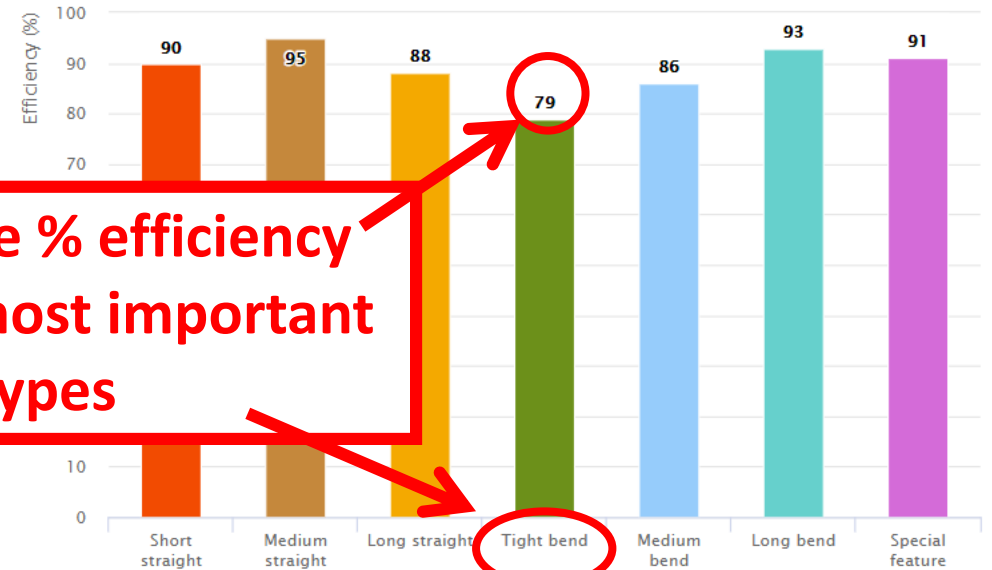
- Monza 2019 - Brian's Banger
- HOME
- MY CAR**
- Car Design
- Workshop Adjustments**
- Safe Speeds
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Adjust each of the 4 settings

Performance percentages

You will need these percentages in order to calculate the speed at which your own car can negotiate each of these features.



Maximise % efficiency for the most important feature types

The track surface at Monza 2019 is Quite smooth

RACE ENGINEER'S PLANNING SHEET

YOUR NAME

TEAM NAME

CIRCUIT

WORKSHOP ADJUSTMENTS

	Settings A	Settings B	Settings C
Engine tuning	60		
Aerodynamic downforce	30		
Suspension Adjustment	40		
Gearbox ratio	50		

Record your best workshop adjustment settings

YOUR 'ACTUAL SAFE SPEEDS' CALCULATIONS

Feature Classification	Max. Safe Speed <i>Copy from Track Plan</i>	WORKSHOP ADJUSTMENTS Performance Percentage Efficiencies			Your 'Actual Safe' Speeds' in km/hour		
		Settings A%	Settings B%	Settings C%	Settings A	Settings B	Settings C
Short Straight	245	90%			221		
Medium Straight	275	95%			261		
Long Straight	325	88%			286		
Tight Bend	200	79%			158		
Medium Bend	220	86%			189		
Long Bend	280	93%			260		
Special Feature	180	91%			164		

$245 \times 90\% = 221$

Using the track plan maximum safe speeds...

...and your % efficiency...

...calculate your car actual safe speeds

STAGE	STOP	STOP
Fuel At Race Start	Stop 1	
Track Surplus		
Tyres At Start	Lap No	
	No Of Litres	
		6



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MY SAFE SPEEDS

SHORT STRAIGHT	221	+ -	km/h:
MEDIUM STRAIGHT	261	+ -	km/h:
LONG STRAIGHT	286	+ -	km/h:
TIGHT BEND	158	+ -	km/h:
MEDIUM BEND	189	+ -	km/h:
LONG BEND	260	+ -	km/h:
SPECIAL FEATURE	164	+ -	km/h:

WHAT ARE SAFE SPEEDS?

Your 'Safe Speeds' are the speeds at which your car can travel through each feature on the track without risk of skidding or spinning off when it comes to a bend or overheating its engine when you are on a straight. They are not necessarily the fastest speeds that your car can race at.

You will need to calculate your car's 'safe' speeds (guess at your peril!) by using your 'Workshop Adjustment Performance Percentages' and the 'Maximum Safe Speed' for each different feature type. These Maximum Safe Speeds are shown on the circuit plans. For example, if the Maximum Safe Speed for a particular feature is 200 km/h, and your 'Workshop Adjustment Performance Percentage' for it is 90%, then your car can safely race at 90% of 200 km/h, i.e. 180 km/h, along it. However, it is worth remembering that this speed will only be safe provided you have not made risky or incorrect decisions elsewhere in the software and only you will know that!

Naturally, if you make a mistake in your calculations, or enter an unsuitable safe speed, who knows what will happen when you start racing - it could get very messy!

Input your safe speeds

Set to safe speeds for first practice lap

FEATURES & RACE SPEEDS



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Classify features

SET TO SAFE SPEEDS

1	Long straight	286	+	-
2	Special feature	164	+	-
3	Long bend	260	+	-
4	Medium straight	261	+	-
5	Unclassified	200	+	-
6	Unclassified	200	+	-
7	Unclassified			
8	Unclassified			
9	Unclassified			
10	Unclassified	200	+	-
11	Unclassified	200	+	-
12	Unclassified	200	+	-
13	Unclassified	200	+	-
14	Unclassified	200	+	-
15	Unclassified	200	+	-
16	Unclassified	200	+	-

Quick adjust speeds

	Safe speed	Quick adjust		
SHORT STRAIGHT:	221	221	+	-
MEDIUM STRAIGHT:	261	261	+	-
LONG STRAIGHT:	286	286	+	-
TIGHT BEND:	158	158	+	-
		189	+	-
		260	+	-
		164	+	-

Classify each track feature from your worksheet



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Monza 2020 Practice Race
Monza 2019, Italy

This is a 30 lap race around Monza 2019

Currently open for entries!

[ENTER THIS RACE](#)

Enter the race for qualifying practice laps



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My driver temperament

You must choose what kind of temperament you wish to have when driving in this race.
Choose carefully: this affects how fast you drive!

- Sedate
- Cautious
- Careful
- Safe
- Enthusiastic
- Daring
- Over Confident
- Dangerous

How do you want your driver to drive?

A safe driver is someone who obeys the rules and regulations whilst being aware of any danger or risk.



MATHS IN MOTION

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Practice laps

You have not yet done any practice laps out

To run a new practice lap, click the button below

RUN PRACTICE LAP

Previous practice laps

This shows all of the practice laps you have

Lap number

Run practice lap

The weather at Monza 2019 is currently **dry**.

Please choose the type of tyres you wish to use for this practice lap by clicking on them below.

Wet Weather	97%	96%	94%	90%	82%	78%	68%	60%	55%	44%
Intermediate (Wet)	85%	87%	96%	97%	95%	88%	80%	73%	64%	60%
Intermediate (Dry)	65%	75%	88%	86%	92%	77%	94%	92%	90%	88%
Standard Dry	50%	65%	70%	80%	86%	92%	96%	98%	98%	98%
Fast Dry	40%	55%	65%	73%	78%	83%	95%	100%	100%	100%

Run a practice lap

Choose the best tyres for practice weather conditions



Do NOT!!! say ready to race or you can't do any more practice laps !!!!!!!

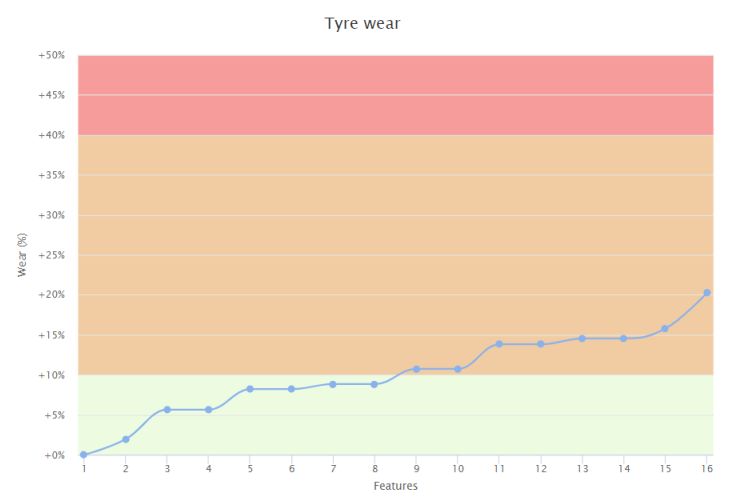
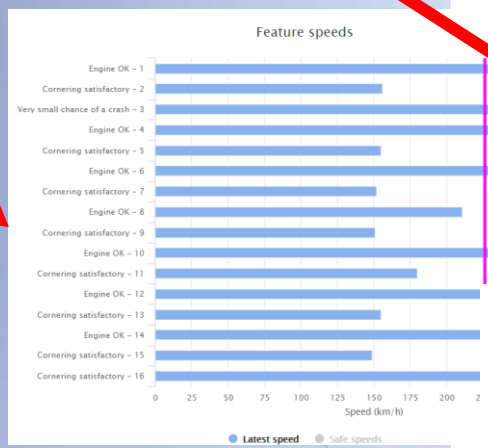
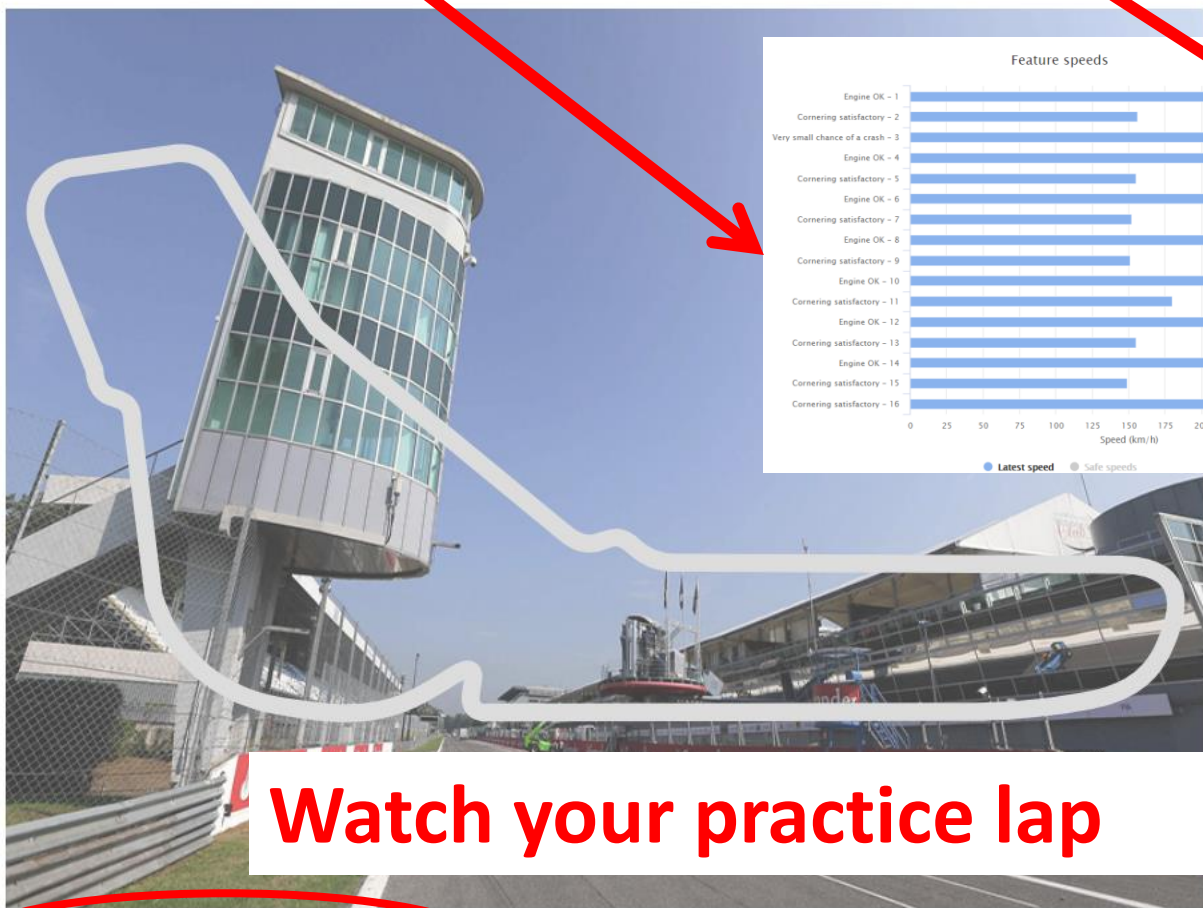
WATCH LAP FEATURES SPLIT TIMINGS SPEEDS ENGINE TEMPS TYRE WEAR ENGINEER'S REPORT



Look at graphs of your car's performance

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Watch your practice lap

Lap time: 83.897s

SHOW TEMPS WATCH LAP

Adjust one feature at a time or all of the same type together



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Classify features

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15	Unclassified	200	+	-
16	Unclassified	200	+	-

Quick adjust speeds

	Safe speed	Quick adjust	+	-
SHORT STRAIGHT:	221	221	+	-
MEDIUM STRAIGHT:	261	261	+	-
LONG STRAIGHT:	286	286	+	-
TIGHT BEND:	158	158	+	-
MEDIUM BEND:	189	189	+	-
		260	+	-
		164	+	-

**Try going faster but watch out for tyre wear and engine overheating.
Keep good records of your best laps (write them down)!**



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Practice laps

You have used 6 practice laps out of a total of 20 allowed.
Your fastest lap was 81.083 seconds which currently places you 1st on the grid.
To run a new practice lap, click the button below.

RUN PRACTICE LAP

Previous practice laps

This shows all of the practice laps you have already run. Your best time is shown in red. Click on the buttons to the right of the lap time to see more information or your engineer's report.

Lap number	Run at	Lap time	Actions
1	20/02/2020 18:03	83.897 secs	
2	20/02/2020 18:10	82.999 secs	
3	21/02/2020 10:05	83.680 secs	
4	21/02/2020 10:08	81.083 secs	
5	21/02/2020 10:11	84.034 secs	
6	21/02/2020 10:11	82.504 secs	

Your fastest practice lap determines your grid position.

Your final practice lap settings will be used in the race.

**Look at weather and fuel.
How long is the track and the race?**

PIT TEAM BRIEFING



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Start of race, starting with 100 litres of fuel and Fast Dry tyres

- Lap 1 +STOP
- Lap 2 +STOP
- Lap 3 +STOP
- Lap 4 +STOP
- Lap 5 +STOP
- Lap 6 +STOP
- Lap 7 +STOP
- Lap 8 +STOP
- Lap 9 +STOP
- Lap 10, adding 50 litres of fuel and putting on Intermediate (Wet) tyres (25.6 s)
- Lap 11 +STOP
- Lap 12 +STOP
- Lap 13 +STOP
- Lap 14 +STOP
- Lap 15 +STOP
- Lap 16 +STOP
- Lap 17 +STOP
- Lap 18 +STOP
- Lap 19 +STOP

Race Information

Race length	30 laps
Fuel consumption	2 km/litre
Pit stop (tyres only)	22.5 s

Weather forecast

14:00	Dry
14:15	Heavy rain
14:30	Sunny
14:45	Sunny
15:00	Sunny
15:15	Sunny
15:30	Sunny
15:45	Sunny
16:00	Sunny

It will be sunny from 16:00 onwards and conditions will remain quite

Have as many pit stops as you like. What tyres and fuel do you need at the start and at each pit stop