

Task 1 (a)

The formula to find acceleration is $a = (v^2 - u^2) / 2s$. The formula to find time is $t = (v - u) / a$

final velocity	66.67 m/s
initial velocity	0 m/s
distance	400 m
acceleration	5.5561111 m/s ²
time	11.999401 s

Task 1(b)

acceleration	2 m/s ²
top speed	240 km/h
	66.67 m/s
initial velocity	0 m/s
time to reach top speed	33.335 s
distance required to reach top speed	1111.22 m

Message to Show Based on Time

The car will lose the race – Acceleration value too low!

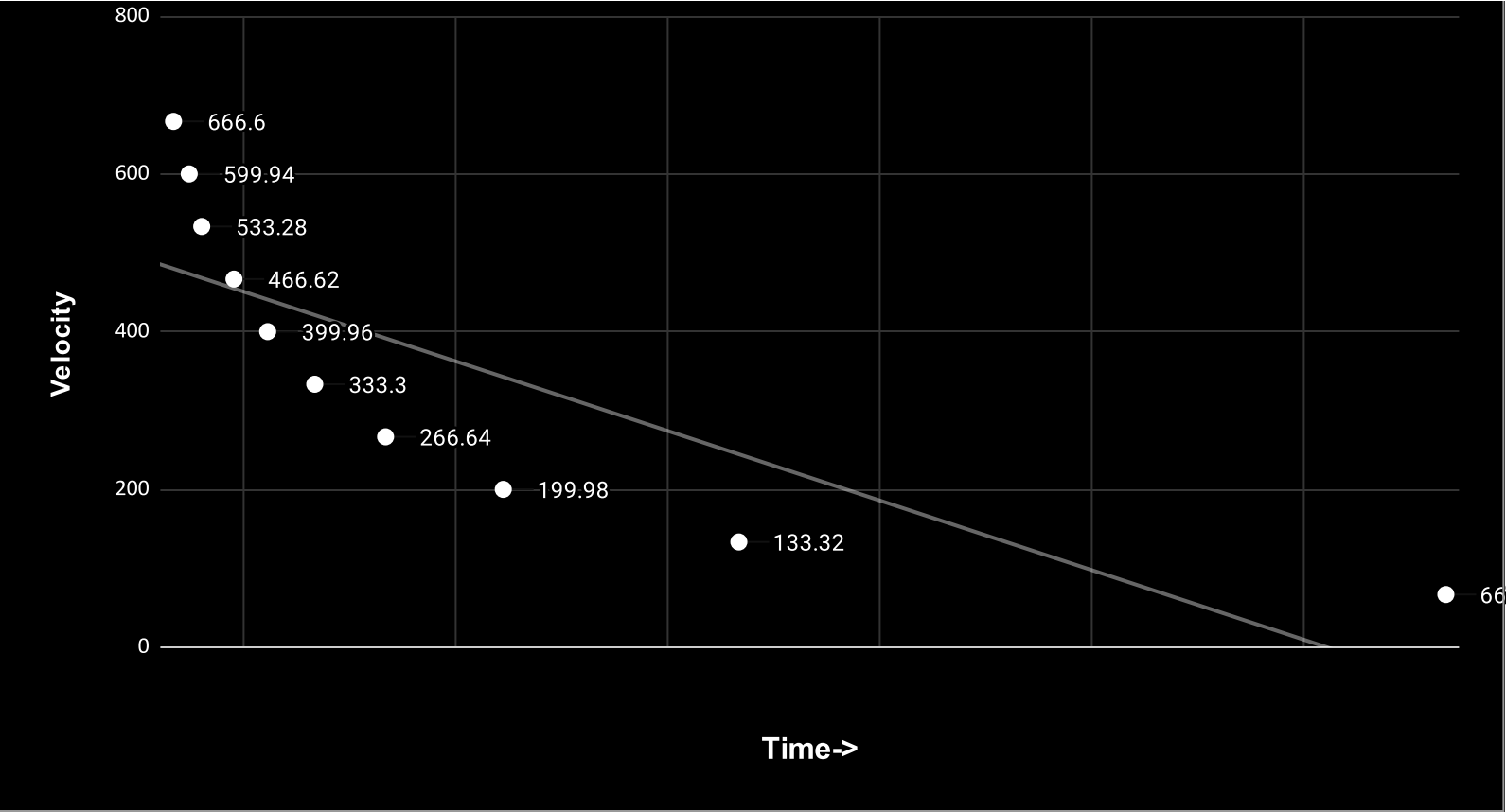
Color based on time taken



Task 1-c

Velocity vs Time Graph

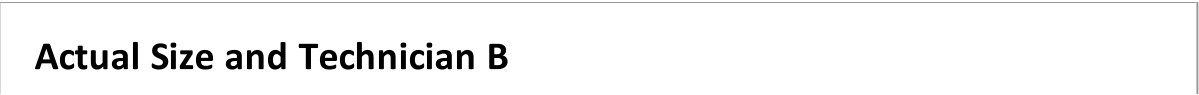
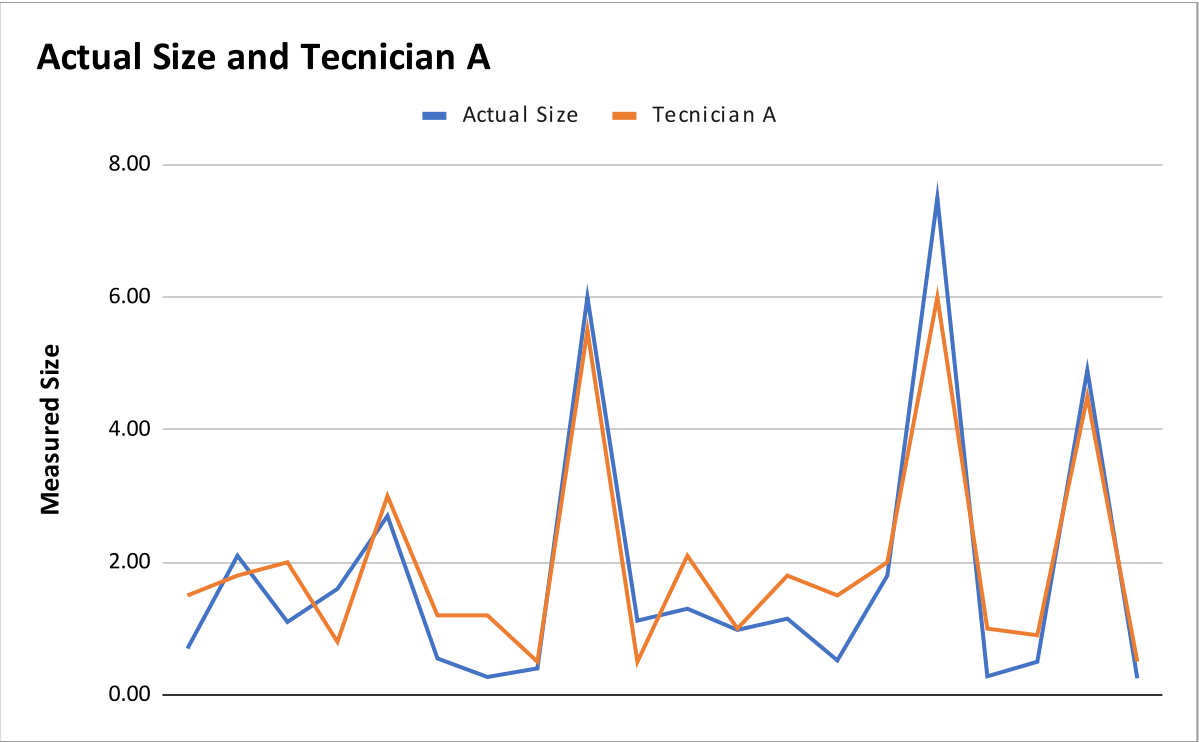
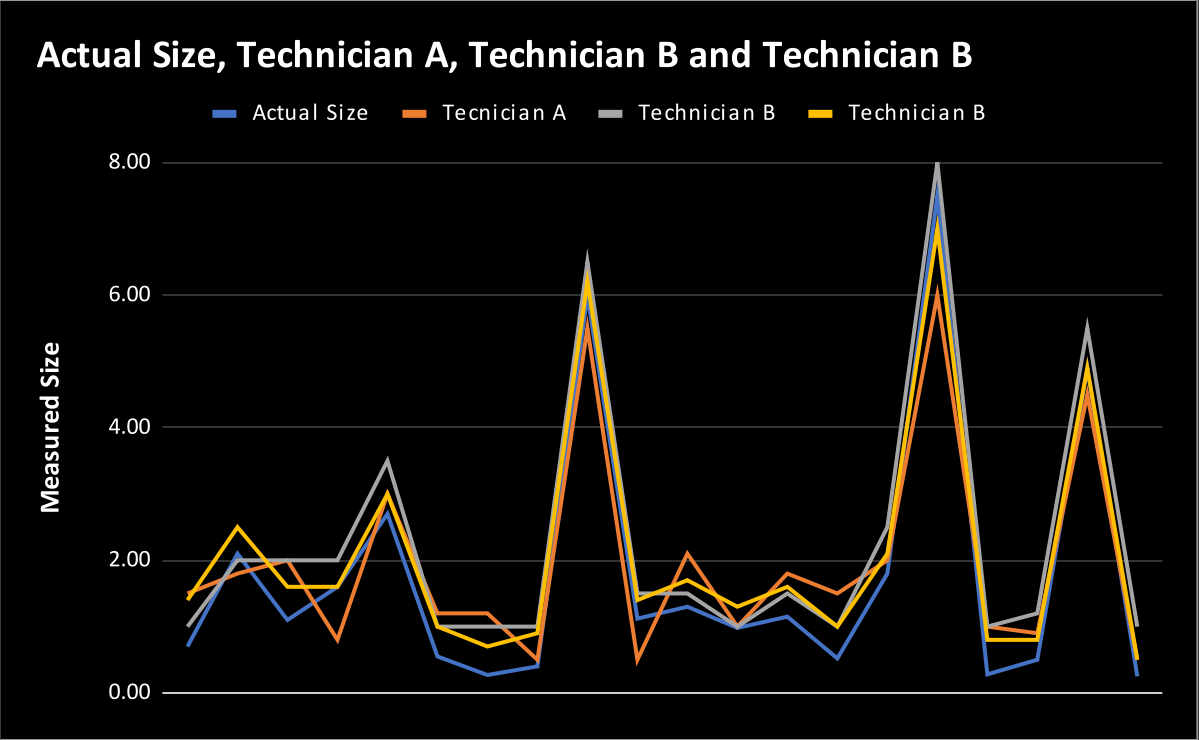
Velocity	Time
66.67	66.67
133.32	33.33
199.98	22.22
266.64	16.67
333.3	13.33
399.96	11.11
466.62	9.52
533.28	8
599.94	7.41
666.6	6.67

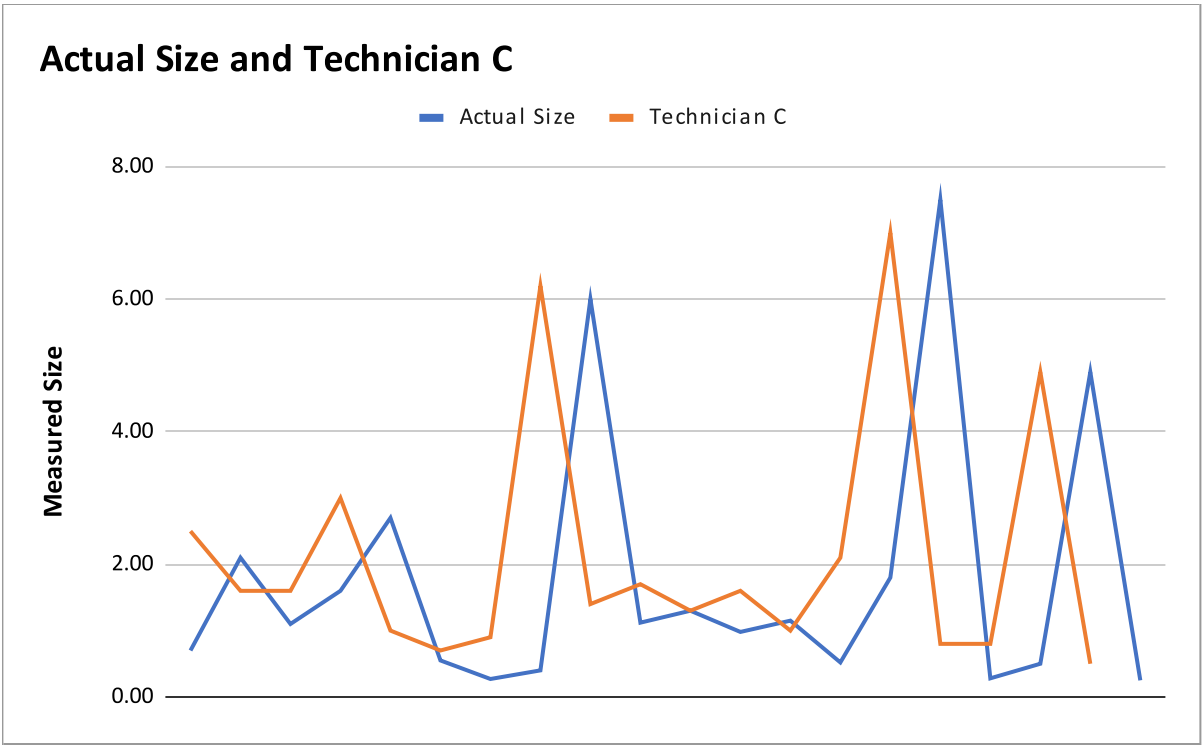
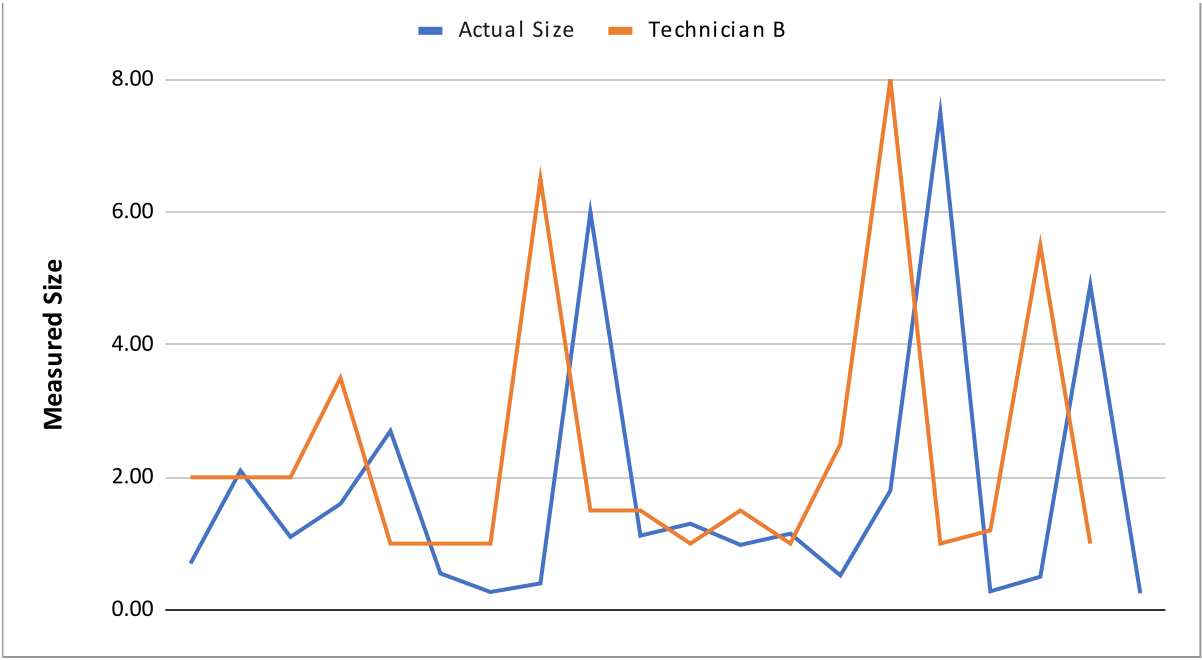


Task 2-a

Sample	Actual	Tecnica	Technici	Technici c
1.00	0.70	1.50	1.00	1.40
2.00	2.10	1.80	2.00	2.50
3.00	1.10	2.00	2.00	1.60
4.00	1.60	0.80	2.00	1.60
5.00	2.70	3.00	3.50	3.00
6.00	0.55	1.20	1.00	1.00
7.00	0.27	1.20	1.00	0.70
8.00	0.40	0.50	1.00	0.90
9.00	6.00	5.50	6.50	6.20
10.00	1.12	0.50	1.50	1.40
11.00	1.30	2.10	1.50	1.70
12.00	0.98	1.00	1.00	1.30

13.00	1.15	1.80	1.50	1.60
14.00	0.52	1.50	1.00	1.00
15.00	1.80	2.00	2.50	2.10
16.00	7.50	6.00	8.00	7.00
17.00	0.28	1.00	1.00	0.80
18.00	0.50	0.90	1.20	0.80
29.00	4.90	4.50	5.50	4.90
20.00	0.25	0.50	1.00	0.50
Mean	1.79	1.97	2.29	2.10
Range	7.25	5.50	7.00	6.50





Answer to the first question

The graphs show that technician C has the closest mean and range values compared to the other two, which explains why C did the best. It has the lowest measurement error two than other two technicians. Additionally, the graph demonstrat

Answer to the second question

The graphs show that technician B has the farthest mean and range values from the other two, which explains why B performed best. Additionally, the graph demonstrates that technician B's results are larger than its true size compared to the other two

Task 2-b

Sample	Actual	Tecnicia	Technici	Technici	Measurement Error	Measurement Error	Measurement Error
1.00	0.70	1.50	1.00	1.40	0.8	0.3	0.7
2.00	2.10	1.80	2.00	2.50	0.3	0.1	0.4
3.00	1.10	2.00	2.00	1.60	0.9	0.9	0.5
4.00	1.60	0.80	2.00	1.60	0.8	0.4	0
5.00	2.70	3.00	3.50	3.00	0.3	0.8	0.3
6.00	0.55	1.20	1.00	1.00	0.65	0.45	0.45
7.00	0.27	1.20	1.00	0.70	0.93	0.73	0.43
8.00	0.40	0.50	1.00	0.90	0.1	0.6	0.5
9.00	6.00	5.50	6.50	6.20	0.5	0.5	0.2
10.00	1.12	0.50	1.50	1.40	0.62	0.38	0.28
11.00	1.30	2.10	1.50	1.70	0.8	0.2	0.4
12.00	0.98	1.00	1.00	1.30	0.02	0.02	0.32
13.00	1.15	1.80	1.50	1.60	0.65	0.35	0.45
14.00	0.52	1.50	1.00	1.00	0.98	0.48	0.48
15.00	1.80	2.00	2.50	2.10	0.2	0.7	0.3
16.00	7.50	6.00	8.00	7.00	1.5	0.5	0.5
17.00	0.28	1.00	1.00	0.80	0.72	0.72	0.52
18.00	0.50	0.90	1.20	0.80	0.4	0.7	0.3
29.00	4.90	4.50	5.50	4.90	0.4	0.6	0
20.00	0.25	0.50	1.00	0.50	0.25	0.75	0.25
					11.82	10.18	7.28
Standard Deviation					2.027288	1.601734	2.036063
					1.834178		

