

Calculations Involving Acceleration

Pay attention to the units being used!

Round answers to two decimal places when needed.

$$a = \frac{v - u}{t} \quad t = \frac{v - u}{a} \quad v = u + (a \times t)$$

a=acceleration

t=time

v=final speed

u=initial speed

	Initial Speed	Final Speed	Time	Acceleration
1	8m/s	25m/s	7 seconds	
2	12m/s		3 seconds	1.6m/s/s
3	0km/h	100km/h	12 seconds	
4	15m/s	30m/s		2.5m/s/s
5	35m/s	12m/s	2.25 seconds	
6	80km/h	0km/h	4.6 seconds	
7	0km/h		2.3 seconds	1.6m/s/s
8	60km/h	0km/h		-4.5km/h/s
9	0km/h	85km/h		14km/h/s
10	12m/s		0.05 minutes	2.6m/s/s
11	10km/h	90km/h	5.5 seconds	
12	25km/h	100km/h	0.08 minutes	
13	100km/h		2.7 seconds	-1.5km/h/s
14	100km/h		2.7 seconds	1.5km/h/s
15	0m/s	45m/s		3.8m/s/s
16	12m/s	18m/s		0.5m/s/s
17	50km/h	0km/h	3.67 seconds	
18	0m/s	85m/s	0.25 minutes	
19	12m/s	45m/s		60m/s/min
20	150km/h		5 seconds	10km/h/s