Acceleration Calculations

1. Change in speed = 14 m/s; time taken = 2 seconds. Calculate the acceleration.

2. A car accelerates from rest (zero speed) up to a speed of 30 m/s in 12 seconds. Calculate the acceleration.

3. A cyclist in the Tour de France accelerates down a hill from 22 m/s to a speed of 37 m/s. This acceleration takes him 2 seconds. Calculate the acceleration.

4. A rocket launching in the Ukraine accelerates upwards from rest to a speed of 12 km/s in 8 seconds. Calculate the acceleration.

5. A cyclist accelerates from 0 m/s to 8 m/s in 3 seconds. What is his acceleration ? Is this acceleration higher than that of a car which accelerates from 0 to 30 m/s in 8 seconds?

6. A car advertisement states that a certain car can accelerate from rest to 70 km/h in 7 seconds. Find the car's average acceleration.

7. A lizard accelerates from 2 m/s to 10 m/s in 4 seconds. What is the lizard's average acceleration?

8. If a Ferrari, with an initial velocity of 10 m/s, accelerates at a rate of 50 m/s^2 for 3 seconds, what will its final velocity be?

9. Complete the following table:

Acceleration (m/s^2)	Starting speed (m/s)	Final speed (m/s)	Time taken (s)
	2	6	2
2	5	25	
10	4		2
8	5		10
4		8	2