

# ACCELERATION

## GRADE 6 PHYSICS

**Part 1. Find the acceleration for each object using the information in the table.**

**Remember:** Acceleration = 
$$\frac{V_{\text{final}} - V_{\text{initial}}}{\text{time}}$$

	Initial velocity	Final velocity	Time	Acceleration
1.	0 m/s	60 m/s	10 s	m/s <sup>2</sup>
2.	10 km/s	55 km/s	15 s	km/s <sup>2</sup>
3.	0 m/s	40 m/s	4 s	m/s <sup>2</sup>
4.	60 m/s	40 m/s	10 s	m/s <sup>2</sup>
5.	20 m/s	5 m/s	2 s	m/s <sup>2</sup>



**Part 2. Read and answer the questions**

6. A motorbike accelerates from rest (0 speed) up to a speed of 30 m/s in 6 seconds.

\_\_\_\_\_ m/s<sup>2</sup>

7. A biker rides down a hill from 22 m/s to a speed of 37 m/s. The acceleration takes him 2 seconds. Calculate the acceleration.

\_\_\_\_\_ m/s<sup>2</sup>

8. A rocket leaves Earth to bring people to Mars. It accelerates upward from rest to a speed of 12 km/s in 8 seconds. Calculate the acceleration.

\_\_\_\_\_ km/s<sup>2</sup>