

9K Speeding up...How forces affects speed

level 5
level 6
level 7




starter one

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Look at the four pictures below. Match the picture with the correct approximate acceleration value:

 Click mouse to reveal answer

	Porsche sports car	Speed Skater	Motorbike	Downhill Skier
Diagram				
	0 to 100km/hr in 3.3 S	0 to 100km/hr in 3.3 S	0 to 100km/hr in 3.3 S	0 to 100km/hr in 3.3 S
	0 to 30km/hr in 6.2 S	0 to 30km/hr in 6.2 S	0 to 30km/hr in 6.2 S	0 to 30km/hr in 6.2 S
	0 to 100km/hr in 5.1 S	0 to 100km/hr in 5.1 S	0 to 100km/hr in 5.1 S	0 to 100km/hr in 5.1 S
	0 to 130km/hr in 20 S	0 to 130km/hr in 20 S	0 to 130km/hr in 20 S	0 to 130km/hr in 20 S

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Answer:

	Porsche sports car	Speed Skater	Motorbike	Downhill Skier
Diagram				
			0 to 100km/hr in 3.3 S	
		0 to 30km/hr in 6.2 S		
	0 to 100km/hr in 5.1 S			
				0 to 130km/hr in 20 S

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Forces cannot be directly observed, but the effects of a force can. If an unbalanced force acts on a object, it will either speed up, slow down, change direction or change shape. Look at the four examples and give the correct units for each type of movement:

 Click mouse to reveal answer

	Speed	Velocity	Acceleration	Deceleration
Diagram				
	ms ⁻¹	ms ⁻¹	ms ⁻¹	ms ⁻¹
	m/s ²	m/s ²	m/s ²	m/s ²
	ms ⁻¹ (0 to 360°)	ms ⁻¹ (0 to 360°)	ms ⁻¹ (0 to 360°)	ms ⁻¹ (0 to 360°)
	- m/s ²	- m/s ²	- m/s ²	- m/s ²





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Answer:

	Speed	Velocity	Acceleration	Deceleration
Diagram				
	ms^{-1}			
			m/s^2	
		ms^{-1} (0 to 360°)		
				$- m/s^2$

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starter three

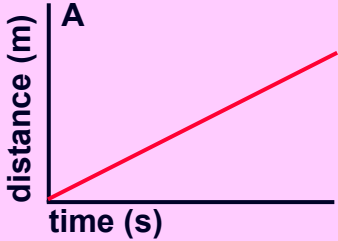
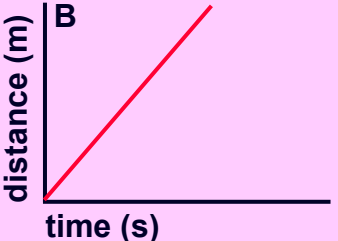
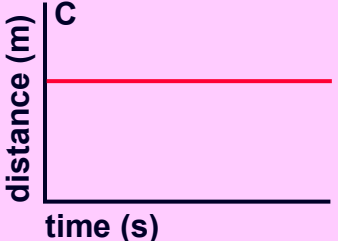
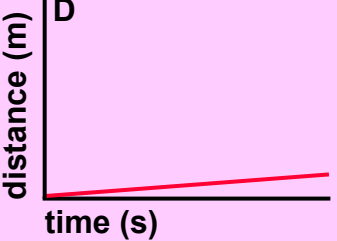
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Which graphs (A, B, C or D) shows an object with (i) the lowest speed (ii) the highest speed (iii) zero speed & (iv) moderate speed:



Click mouse to reveal answer

	Graph one	Graph two	Graph three	Graph four
Diagram				
Lowest speed	Lowest speed	Lowest speed	Lowest speed	Lowest speed
Highest speed	Highest speed	Highest speed	Highest speed	Highest speed
Zero speed	Zero speed	Zero speed	Zero speed	Zero speed
Moderate speed	Moderate speed	Moderate speed	Moderate speed	Moderate speed

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Answer:

	Graph one	Graph two	Graph three	Graph four
Diagram				
				Lowest speed
		Highest speed		
			Zero speed	
	Moderate speed			