

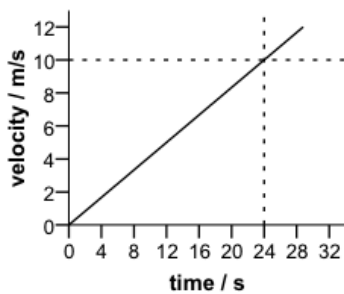


## Speed, Distance, Time

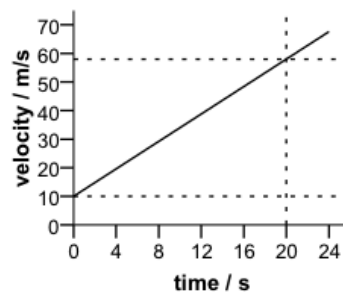
- 23 A car is being driven at  $20 \text{ m/s}$  when the driver sees a child run into the road. The driver's usual reaction time is  $0.70 \text{ s}$ , but this is doubled because the driver is tired. Once the driver applies the brakes, the car is brought uniformly to rest in a further  $3.3 \text{ s}$ . What is the total distance travelled by the car between when the driver first sees the child to when the car stops?
- A 33 m  
B 40 m  
C 47 m  
D 61 m  
E 66 m  
F 80 m  
G 94 m

2015

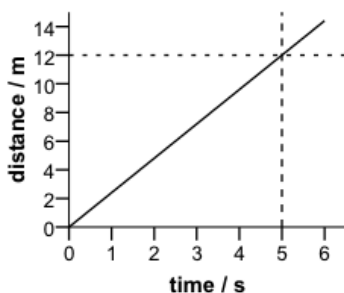
- 19 The diagrams below show velocity-time or distance-time graphs for 4 different objects, P, Q, R and S.



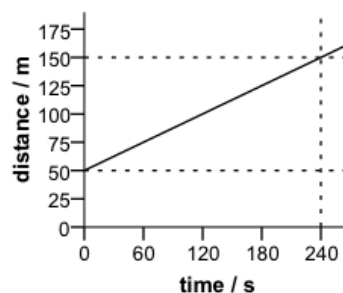
P



Q



R



S

Which graph(s) show an object accelerating at  $2.4 \text{ m/s}^2$ ?

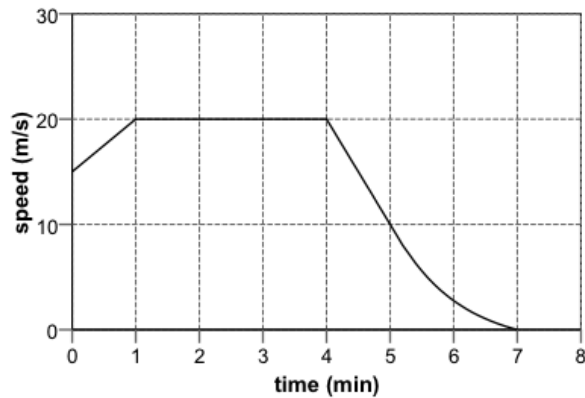
- A P only  
B Q only  
C R only  
D S only  
E P and Q  
F Q and R  
G P and S

2010



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- 15 The graph represents the motion of a vehicle during part of a journey.



What is the best estimate of the distance travelled during the part of the journey shown?

- A 100.00m
- B 107.50m
- C 115.00m
- D 6.00km
- E 6.45km
- F 6.90km

2009