Odd One Out — Constant Acceleration Formulae

Colour in the odd one out in each set of three.

1	A particle moves from rest to a final velocity of $15\ \text{ms}^{-1}$ in 3 seconds. Find the constant acceleration.	A particle with an initial velocity of $32\ \text{ms}^{-1}$ comes to rest after 6.4 seconds. Calculate its acceleration.	A particle with an initial velocity of $5\ \text{ms}^{-1}$ travels for 4 seconds. If its final velocity is $25\ \text{ms}^{-1}$, what is its constant acceleration?
2	A car starts from rest and moves with a constant acceleration, reaching $30\ \text{ms}^{-1}$ in 4.8 seconds. Find the distance travelled.	A car with an initial velocity of $32\ \text{ms}^{-1}$ decelerates constantly at $4.8\ \text{ms}^{-2}$ over 5 seconds. Find the distance travelled by the car.	A car moves with constant deceleration, reducing its velocity from $32\ \text{ms}^{-1}$ to $18\ \text{ms}^{-1}$ in 4 seconds. Calculate the distance travelled.
3	A cyclist with an initial velocity of $10\ \text{ms}^{-1}$ accelerates downhill constantly at $2\ \text{ms}^{-2}$. If the final velocity is $27\ \text{ms}^{-1}$, calculate the time taken.	A cyclist travelling at $12\ \text{ms}^{-1}$ brakes and comes to rest over a distance of $51\ \text{m}$. Find the time taken.	A cyclist travels at a constant velocity of $8\ \text{ms}^{-1}$. Find the time taken to travel $34\ \text{m}$.
4	A particle moves with a constant acceleration, travelling 48 m in 2 seconds. If the initial velocity is $18\ \text{ms}^{-1}$, find the final velocity.	A particle decelerates at $5\ \text{ms}^{-2}$ for 2 seconds. If the initial velocity is $20\ \text{ms}^{-1}$, find the final velocity of the particle.	A particle starts with an initial velocity of $20\ \text{ms}^{-1}$, accelerating at $10\ \text{ms}^{-2}$ over a distance of 25 m. Calculate the particle's final velocity.
5	A bus travels 300 m in 10 seconds, moving with a constant acceleration of $2.5\ \text{ms}^{-2}$. Calculate the initial velocity of the bus.	A bus travels for 12 seconds, reaching a final velocity of $20\ \text{ms}^{-1}$. If the bus travels 210 m in this time, calculate its initial velocity.	A bus accelerates at $1.2\ \text{ms}^{-2}$ for 6 seconds, reaching a final velocity of $24.7\ \text{ms}^{-1}$. Find the initial velocity of a bus.
6	A train slows down to rest with a constant deceleration of $0.8\ \text{ms}^{-2}$ for 20 seconds. Find the distance travelled by the train.	A train with an initial velocity of $40\ \text{ms}^{-1}$ moves with a constant acceleration of $2.4\ \text{ms}^{-2}$. If the train's final velocity is $50\ \text{ms}^{-1}$, find the distance travelled.	A train passes point A at a velocity of $32\ \text{ms}^{-1}$ and then passes point B 5 seconds later. If the train moves with constant acceleration of $2.2\ \text{ms}^{-2}$, find the distance AB.