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