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| **Odd One Out** | **Constant Acceleration Formulae** |

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

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| **1** | A particle moves from rest to a final velocity of $15 ms^{-1}$ 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 $30 ms^{-1}$ 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 $10 ms^{-1}$ accelerates downhill constantly at $2 ms^{-2}$. If the final velocity is $27 ms^{-1},$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 $8 ms^{-1}.$ Find the time taken to travel $34 m$. |
| **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 $1.2 ms^{-2}$ for $6$ seconds, reaching a final velocity of $24.7 ms^{-1}$. Find the initial velocity of a bus. |
| **6** | A train slows down to rest with a constant deceleration of $0.8 ms^{-2}$ 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.  |