

1c: 'Teaching' live content



Opportunities for support:

1. Provide scaffolded tasks to support
2. Share videos to unpick misconceptions; live model examples before practice
3. Use break out rooms to target groups (LSAs/Teacher)

Support: Scaffolded tasks

Velocity Time Graphs

The following table represents the movement of a car:-

Velocity (m/s)	0	5	10	15	15	15	12	9	6	3	0
Time (seconds)	0	1	2	3	4	5	6	7	8	9	10

Draw a Velocity time graph (with time on the x-axis)

Answer the questions below:

1. What is the acceleration of the car between 0 and 3 seconds?
[Remember acceleration is equal to the change in velocity ÷ time]
2. Between 3 and 5 seconds the car is still accelerating - true or false? Explain your answer.
3. How would you describe the movement of the car between 5 and 10 seconds?
4. What distance does the car travel in the first 3 seconds?
5. What distance does the car travel in the total journey?

More difficult

A racing car (at rest) accelerates uniformly from the starting grid on the race track and reaches a top velocity of 30 meters/second/second after 5 seconds. For the next 4 seconds the acceleration is 0 and finally the car decelerates (brakes) at 4meters/second/second for 5 seconds.

Draw a Velocity time graph (with time on the x-axis). If you are stuck, try marking what the velocity would be after each second!

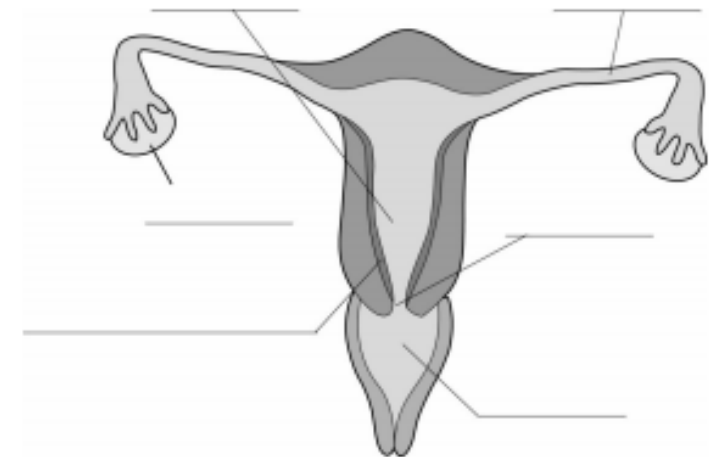
Answer the questions below:

1. What distance does the car travel in the first 5 seconds?
2. What is the velocity of the car after 7 seconds?
3. What is the velocity of the car after 14 seconds?
4. If the car carried on decelerating at 4m/s^2 , how many more seconds would it take before it came to a stop?
5. What is the acceleration in the first 5 seconds?

The female reproductive system

Use these words to label the diagram.

Uterus (womb)	Oviduct (fallopian tube)	ovary
cervix	lining of the uterus	vagina



Draw a line to match each part to its function.

Part

uterus (womb)
oviduct (Fallopian tube)
Ovary
cervix
lining of the uterus
vagina

Function

Sperm enter the body here.
Eggs (ova) are made, stored and released from here.
This is a narrow opening between the vagina and uterus.
This is where a fetus will develop.
Eggs travel along this tube on the way to the uterus.
This thickens every month in order to receive a fertilised egg.

Support: Videos to address misconceptions



$$\frac{1 + \cot x}{1 + \tan x} = 5.$$

Support: Live modelling example questions

Walkthrough

$$\textcircled{3} \text{ efficiency} = \frac{\text{useful output} \textcircled{1}}{\text{total input} \textcircled{2}}$$

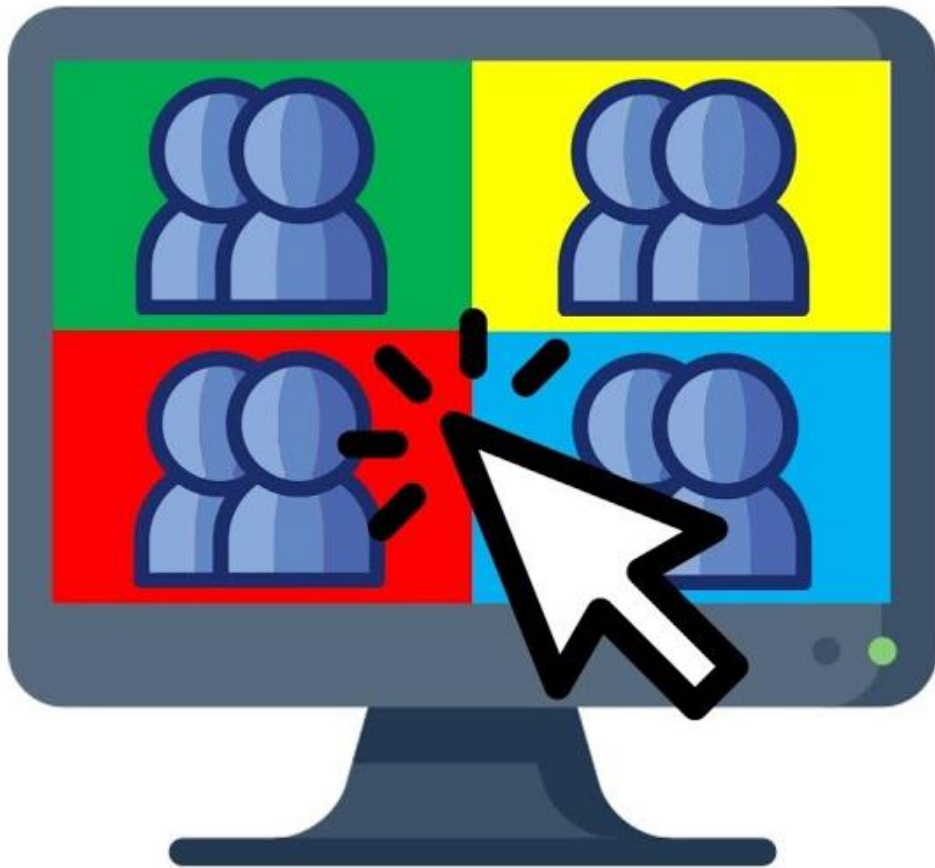
$$\begin{aligned} \textcircled{1} \quad E &= p \times t \\ &800 \times (3 \times 60) \\ &800 \times 180 \\ &\underline{144,000 \text{ J}} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad E &= Q \times V \\ &850 \times 230 \\ &\underline{195,500 \text{ J}} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad &\frac{144,000}{195,500} \\ &= 0.736 \\ &= 0.74 \end{aligned}$$

$$\boxed{74\%}$$

Support: Breakout rooms



- Targeting students for support/challenge
- Allowing for small group discussion
- Promoting collaborative working
- Enabling targeted LSA support
- Intervening during 'live lessons'