Part B: The acceleration formula, form 1

$$a = \frac{v_f - v_i}{\Delta t}$$

Symbol	Quantity	SI Unit	Notes
а	Acceleration	m/s ²	Even though there is a square, treat m/s ² is just like any other unit!
			Velocity at the end of
v_f	Final velocity	m/s	the motion.
,			Velocity at the
v_i	Initial velocity	m/s	beginning of the motion
Δt	Time interval	seconds	

B.1 I have an initial velocity of 10 m/s. I have a final velocity of 40 m/s. A time of 5 seconds passes. What is my acceleration?

passes. What is my acceleration		
Looking For	Formula	
Already Know		
Tiready Know		
Answer in a complete sentence i	with unit:	
This wor in a complete sentence		

B.2 I have an initial velocity of 2 m/s. I have a final velocity of 26 m/s. A time of 6 s passes. What is my acceleration?

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Looking For	Formula		
Already Know		-	
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Answer in a complete sent	ence with unit:		
1			

Looking For	Formula
Already Know	<u></u>
Answer in a complete sen	tence with unit:
"At Rest"	
If a problem ever says yo	are "at rest," this means that velocity equals 0.
If you begin at rest, initial	velocity = 0.
If you end at rest, final ve	locity = 0.
Negative Acceleration (I	Deceleration)
Acceleration can be posit	ve or negative. If it is negative, which is sometimes called
Acceleration can be posited deceleration, it means you	ve or negative. If it is negative, which is sometimes called ar speed is decreasing.
deceleration, it means you B.4 I begin at rest. I have	
deceleration, it means you	ar speed is decreasing.
B.4 I begin at rest. I have acceleration? Looking For	a final velocity of 40 m/s. A time of 5 s passes. What is my
B.4 I begin at rest. I have acceleration? Looking For	a final velocity of 40 m/s. A time of 5 s passes. What is my
B.4 I begin at rest. I have acceleration?	a final velocity of 40 m/s. A time of 5 s passes. What is my
deceleration, it means you B.4 I begin at rest. I have acceleration? Looking For Already Know	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula
B.4 I begin at rest. I have acceleration? Looking For	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula
deceleration, it means you B.4 I begin at rest. I have acceleration? Looking For Already Know	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit:
B.4 I begin at rest. I have acceleration? Looking For Already Know B.5 I have an initial veloce What is my acceleration?	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit: ity of 50 m/s. I slow down until I am at rest. A time of 10 s passes
B.4 I begin at rest. I have acceleration? Looking For Already Know B.5 I have an initial veloce What is my acceleration?	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit:
B.4 I begin at rest. I have acceleration? Looking For Already Know B.5 I have an initial veloce What is my acceleration? Looking For	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit: ity of 50 m/s. I slow down until I am at rest. A time of 10 s passes
B.4 I begin at rest. I have acceleration? Looking For Already Know Answer in a complete sen	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit: ity of 50 m/s. I slow down until I am at rest. A time of 10 s passes
B.4 I begin at rest. I have acceleration? Looking For Already Know B.5 I have an initial veloce What is my acceleration? Looking For	a final velocity of 40 m/s. A time of 5 s passes. What is my Formula tence with unit: ity of 50 m/s. I slow down until I am at rest. A time of 10 s passes

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B.6 A car has an initial velocity	of 24 m/s. It ha	s a final velocity	of 10 m/s. A	time of 7 s passes
What is its acceleration?				

What is its accordation:			
Looking For	Formula		
		<u>i</u>	
Already Know			
Answer in a complete sentence	Answer in a complete sentence with unit:		
7 ms wer in a complete sentence	S WILL WILL.		

B.7

Acceleration is positive. Which is greater, initial velocity or final velocity?

B.8

My acceleration is negative. Which is greater, initial velocity or final velocity?

Answers

B.1 $a = 6 \text{ m/s}^2$ **B.2** $a = 4 \text{ m/s}^2$ **B.3** $a = 5 \text{ m/s}^2$ **B.4** $a = 8 \text{ m/s}^2$ **B.5** $a = -5 \text{ m/s}^2$ **B.6** $a = -2 \text{ m/s}^2$

B.7 final velocity

B.8 initial velocity