Part B: The acceleration formula, form 1

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

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

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

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?

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

B.3 I have a initial velocity of 7 m/s. I have a final velocity of 57 m/s. A time of 10 s passes. What is my acceleration?

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

"At Rest"

If a problem ever says you are "at rest," this means that velocity equals 0.
If you begin at rest, initial velocity = 0.
If you end at rest, final velocity = 0.

Negative Acceleration (Deceleration)

Acceleration can be positive or negative. If it is negative, which is sometimes called *deceleration*, it means your speed is decreasing.

B.4 I begin at rest. I have a final velocity of 40 m/s. A time of 5 s passes. What is my acceleration?

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

B.5 I have an initial velocity of 50 m/s. I slow down until I am at rest. A time of 10 s passes. What is my acceleration?

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

B: The Acceleration Formula Name _____

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

Looking For	Formula
Already Know	
Answer in a complete sentence *with unit*:	

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 m/s^2
B.2 a = 4 m/s^2
B.3 a = 5 m/s^2
B.4 a = 8 m/s^2
B.5 a = - 5 m/s^2
B.6 a = - 2 m/s^2
B.7 final velocity
B.8 initial velocity