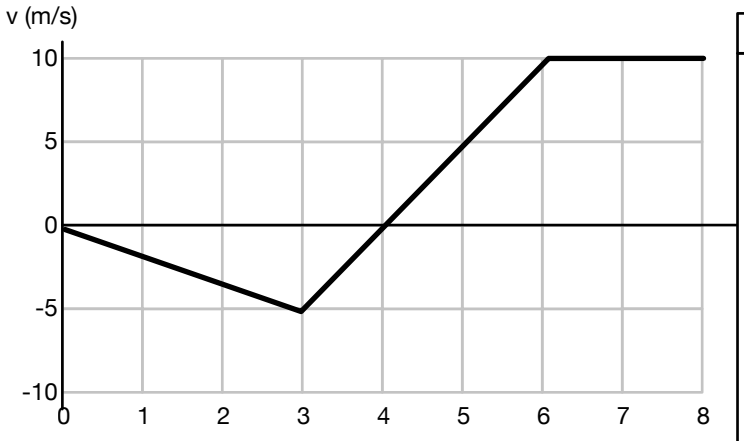
Cycle 14 Motion Graphs

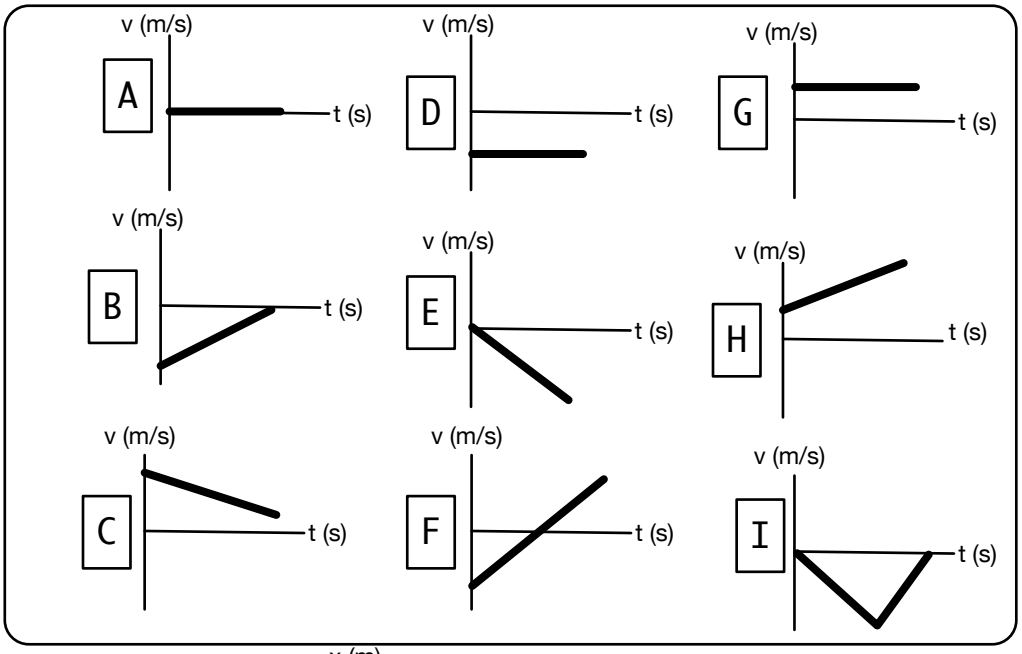
Review



total change in position calculation

from when to when	description (words)	acceleration calculation

1. Constant speed the whole time.
2. Speeds up the whole time.
3. Slows down the whole time.
4. Initial velocity is zero.
5. Ends up stopped.
6. Starts with a velocity to the left.
7. Starts with a velocity to the right.
8. Speeds up then slows down.
9. Has a positive acceleration the whole time.
10. Has a negative acceleration the whole time.
11. Never goes right.
12. Never goes left.
13. Changes direction.



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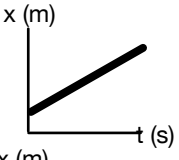

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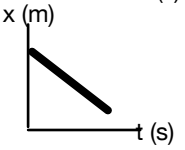

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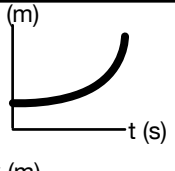

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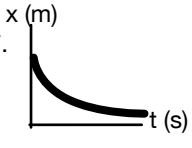

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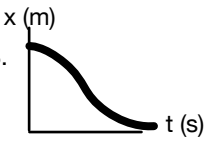
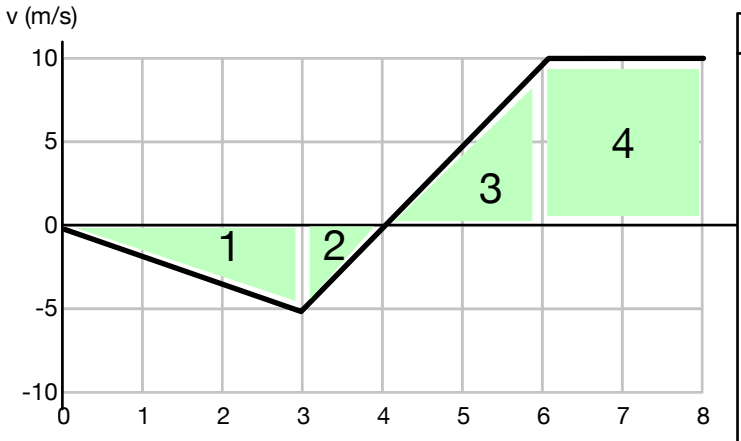


Cycle 14 Motion Graphs

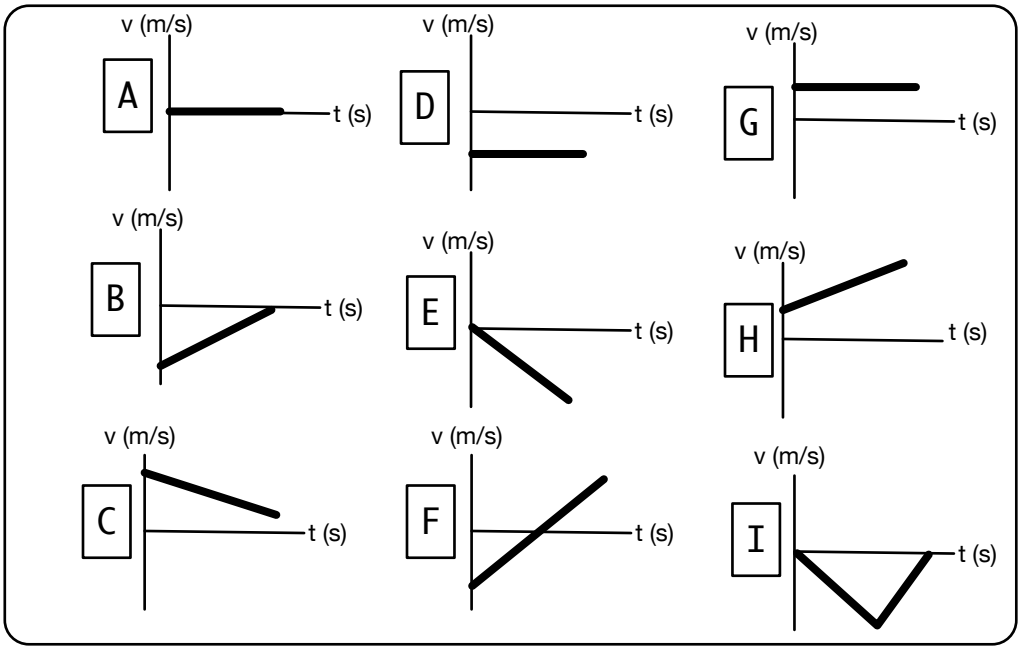
Review

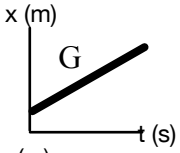


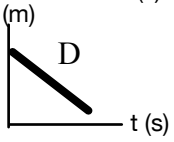
total change in position calculation
1: 1/2bh = (1/2)(3 s)(-5 m/s) = -7.5 m
2: 1/2bh = (1/2)(1 s)(-5 m/s) = -2.5 m
3: 1/2bh = (1/2)(2 s)(10 m/s) = 10 m
4: bh = (2 s)(10 m/s) = 20 m
Δx = -7.5 + -2.5 + 10 + 20 = 20 m

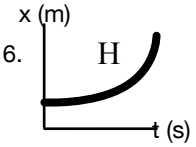
from when to when	description (words)	acceleration calculation
0 s to 3 s	Speed up, moving left.	rise/run = -5/3 = -1.67 m/s/s
3 s to 4 s	Slow down, moving left.	rise/run = +5/1 = +5 m/s/s
4 s to 6 s	Speed up, moving right.	rise/run = +10/2 = +5 m/s/s
6 s to 8 s	Constant velocity, moving right.	0

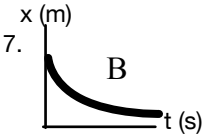
1. Constant speed the whole time. ADG
2. Speeds up the whole time. EH
3. Slows down the whole time. BC
4. Initial velocity is zero. AEI
5. Ends up stopped. ABI
6. Starts with a velocity to the left. BDF
7. Starts with a velocity to the right. CGH
8. Speeds up then slows down. I
9. Has a positive acceleration the whole time. BFH
10. Has a negative acceleration the whole time. CE
11. Never goes right. ABDEI
12. Never goes left. ACGH
13. Changes direction. F



14. 

15. 

16. 

17. 

18.