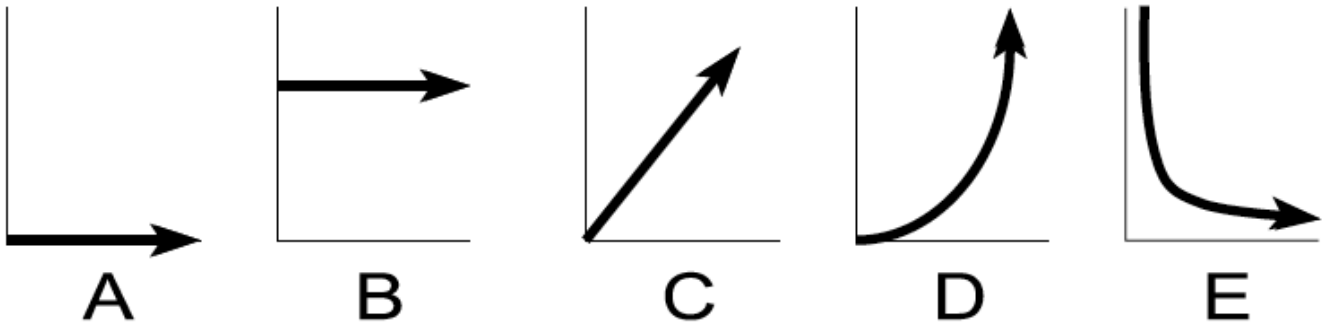
MOTION GRAPH
Review

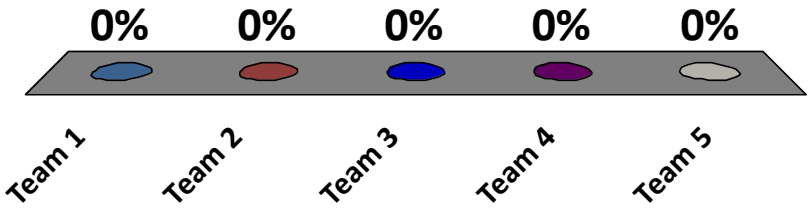
Select Your Team

This TP goes along with 1: Motion Worksheet – Interpreting Motion Graphs



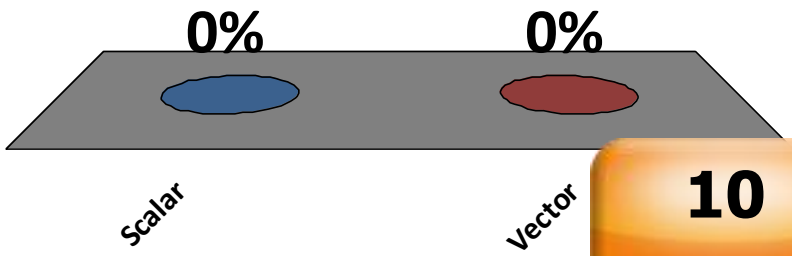
Please select a Team.

1. Team 1
2. Team 2
3. Team 3
4. Team 4
5. Team 5



Lets start easy: *Speed*

1. Scalar
2. Vector

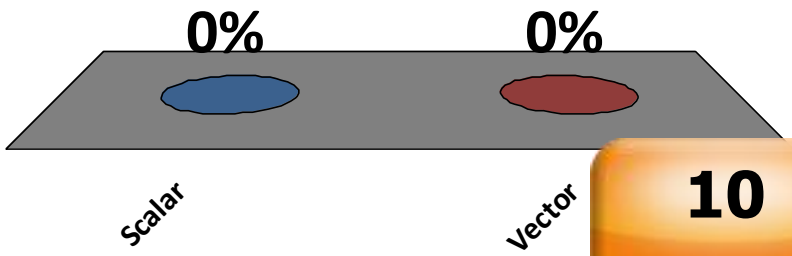


10

Countdown

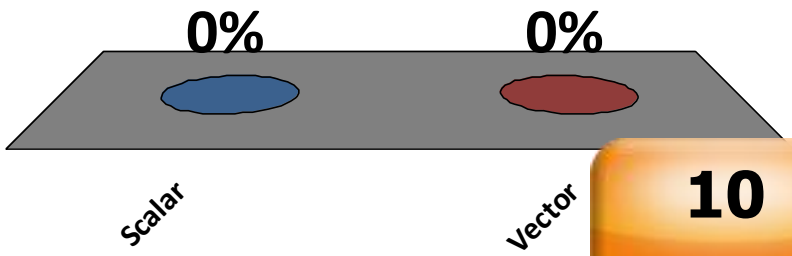
Lets start easy: *Acceleration*

1. Scalar
2. ✓ Vector



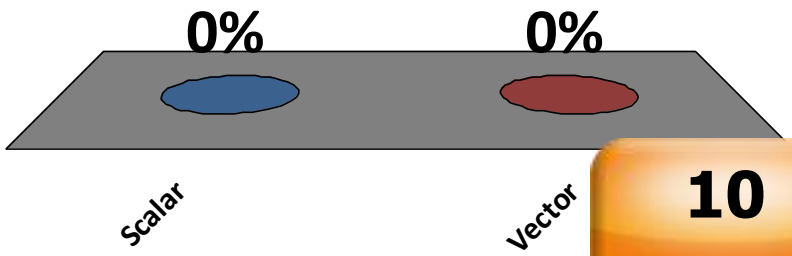
Lets start easy: *Displacement*

1. Scalar
2. ✓ Vector



Lets start easy: *Distance*

1. Scalar
2. Vector

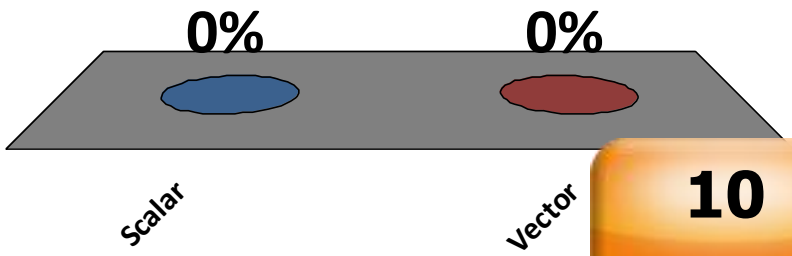


10

Countdown

Lets start easy: *Velocity*

1. Scalar
2. ✓ Vector

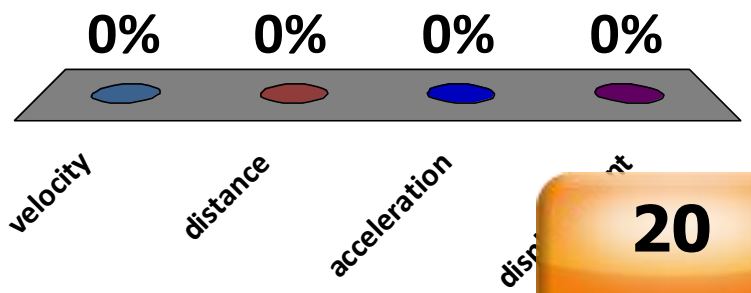


Team Scores

475	Team 2
466.67	Team 3
400	Team 4
375	Team 1
333.33	Team 5

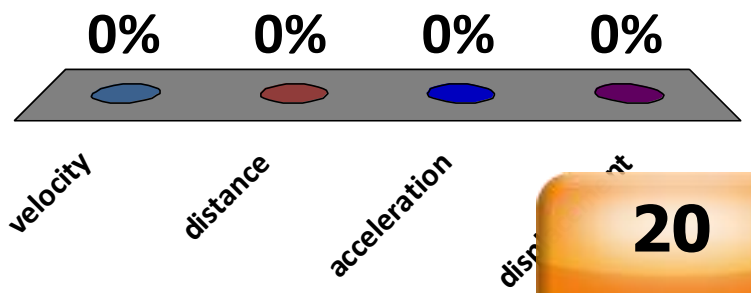
The slope of a position-time graph indicates an objects …

1. velocity
2. distance
3. acceleration
4. displacement



The slope of a velocity-time graph indicates an objects …

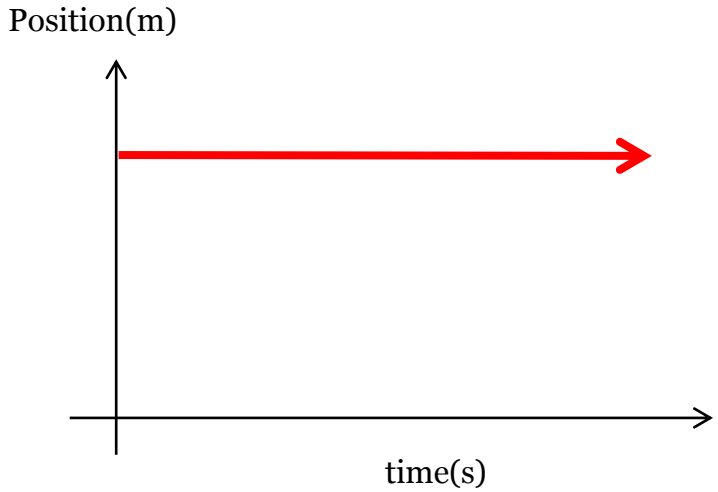
1. velocity
2. distance
3. acceleration
4. displacement



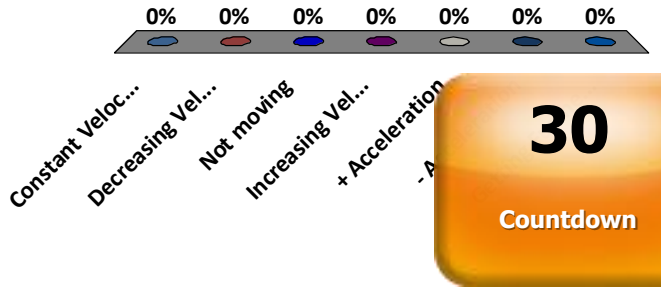
Team Scores

650	Team 2
600	Team 3
483.33	Team 4
475	Team 1
375	Team 5

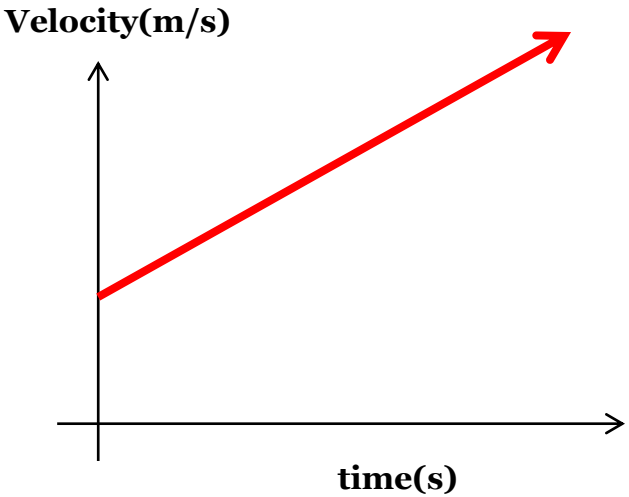
Use the phrase to describe the graph. There may be more than 1 correct answer.



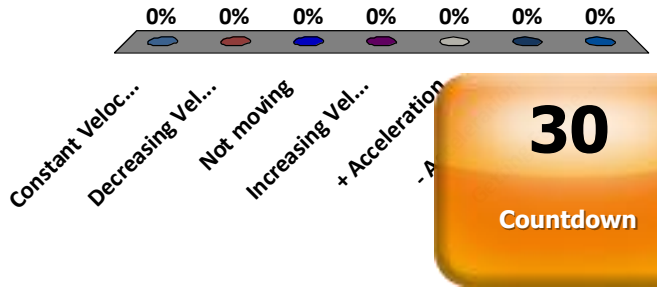
1. **Constant Velocity** ✓
2. **Decreasing Velocity**
3. **Not moving** ✓
4. **Increasing Velocity**
5. **+ Acceleration**
6. **- Acceleration**
7. **Getting Further away.**



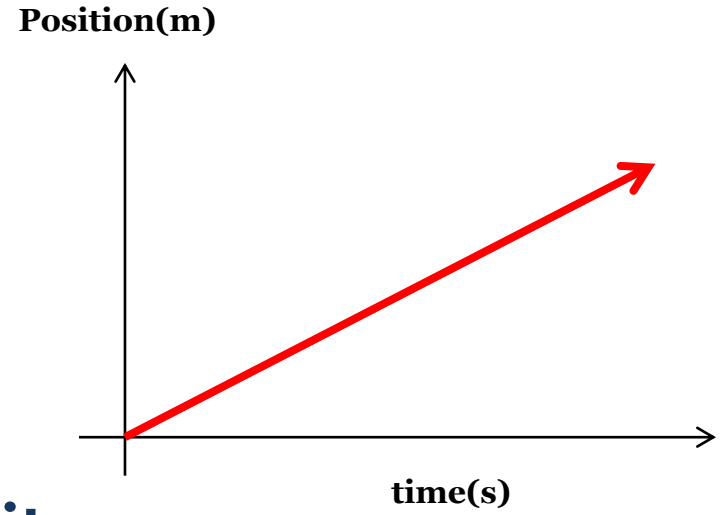
Use the phrase to describe the graph. There may be more than 1 correct answer.



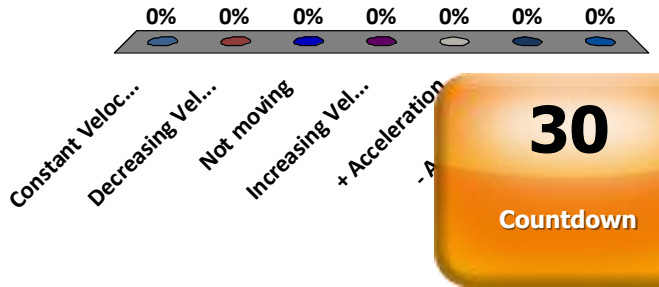
1. Constant Velocity
2. Decreasing Velocity
3. Not moving
4. ✓ Increasing Velocity
5. ✓ + Acceleration
6. - Acceleration
7. ✓ Getting Further away.



Use the phrase to describe the graph. There may be more than 1 correct answer.



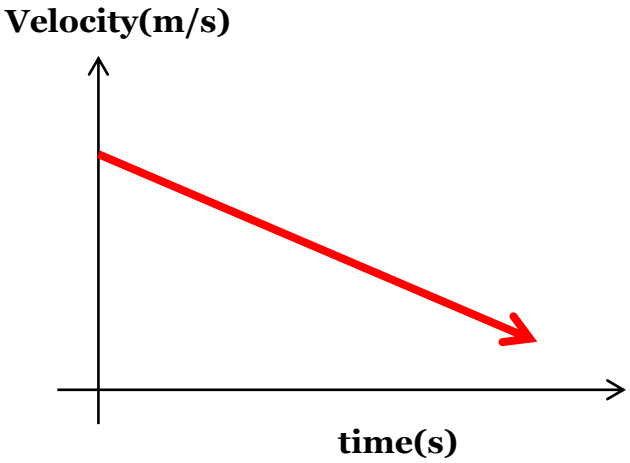
1. ✔ Constant Velocity
2. Decreasing Velocity
3. Not moving
4. Increasing Velocity
5. + Acceleration
6. - Acceleration
7. ✔ Getting Further away.



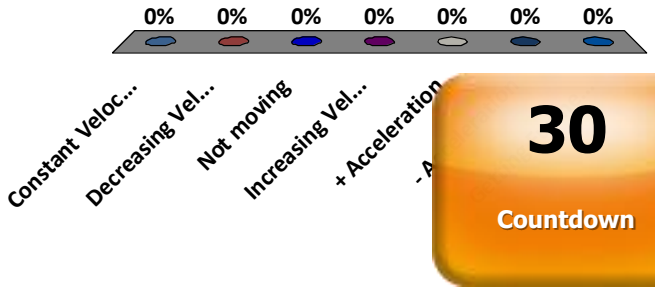
Team Scores

925	Team 2
900	Team 3
758.33	Team 4
725	Team 1
658.33	Team 5

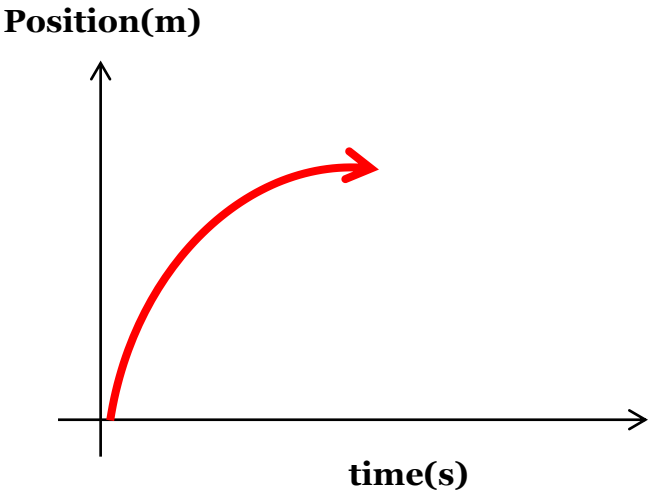
Use the phrase to describe the graph. There may be more than 1 correct answer.



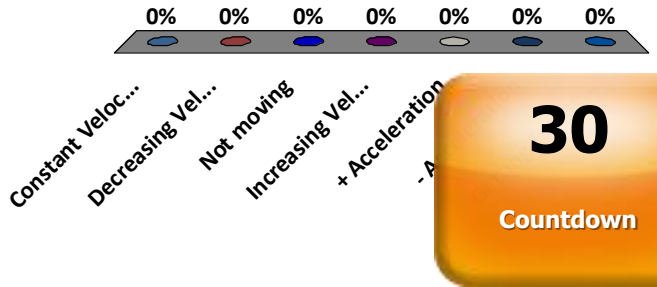
1. Constant Velocity
2. ✓ Decreasing Velocity
3. Not moving
4. Increasing Velocity
5. + Acceleration
6. ✓ - Acceleration
7. ✓ Getting Further away.



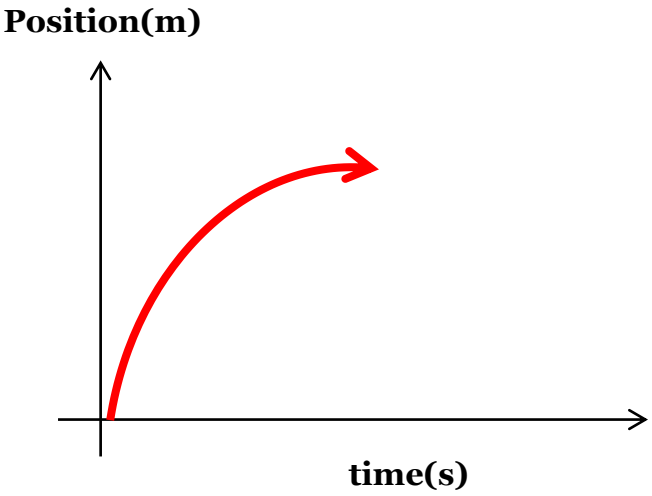
Use the phrase to describe the graph. There may be more than 1 correct answer.



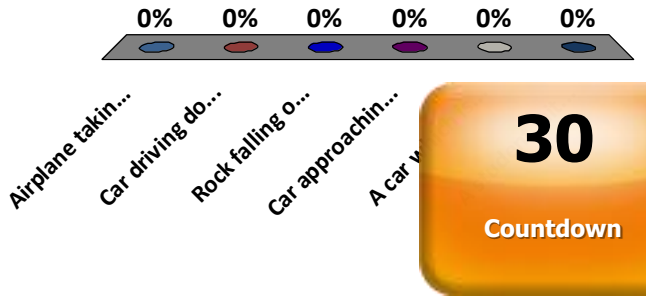
1. Constant Velocity
2. ✓ Decreasing Velocity
3. Not moving
4. Increasing Velocity
5. + Acceleration
6. ✓ - Acceleration
7. ✓ Getting Further away.



Use the phrase to describe the graph. There may be more than 1 correct answer.



1. Airplane taking off.
2. Car driving down the highway.
3. Rock falling off a cliff.
4. ✓ Car approaching a red light.
5. A car which is stopped.
6. A student initially traveling at 2m/s that accelerates to pass a slower student in the hall.

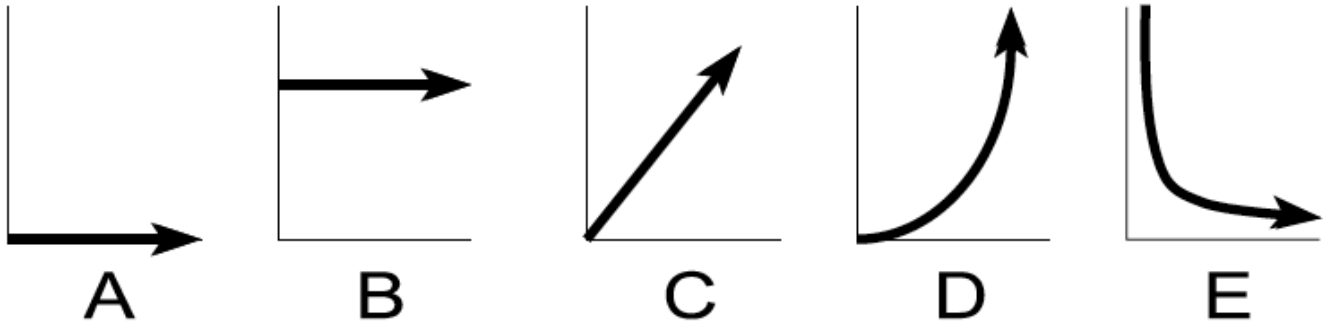


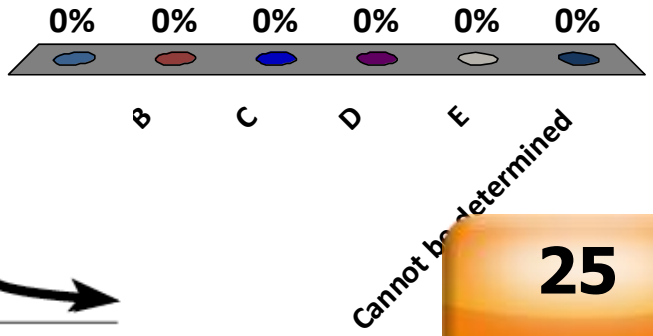
Team Scores

1200	Team 2
1166.67	Team 3
975	Team 4
925	Team 1
891.67	Team 5

Which shape fits a *position-time graph* of an object moving at constant (non-zero) speed?

1. A
2. B
3. ✓ C
4. D
5. E
6. Cannot be determined



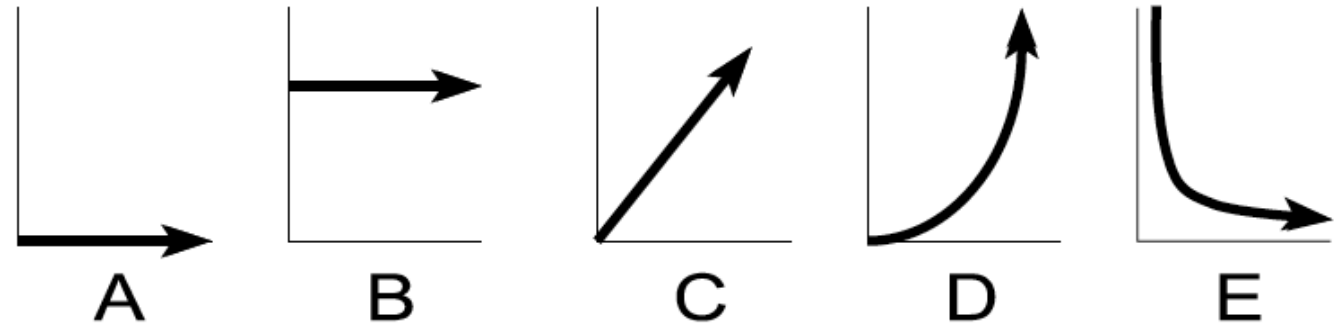


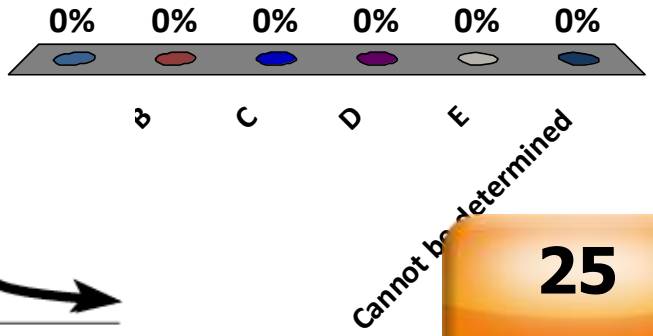
25

Countdown

Which shape fits a *velocity-time graph* of an object moving at a constant non-zero speed?

1. A
2. B ✓
3. C
4. D
5. E
6. Cannot be determined



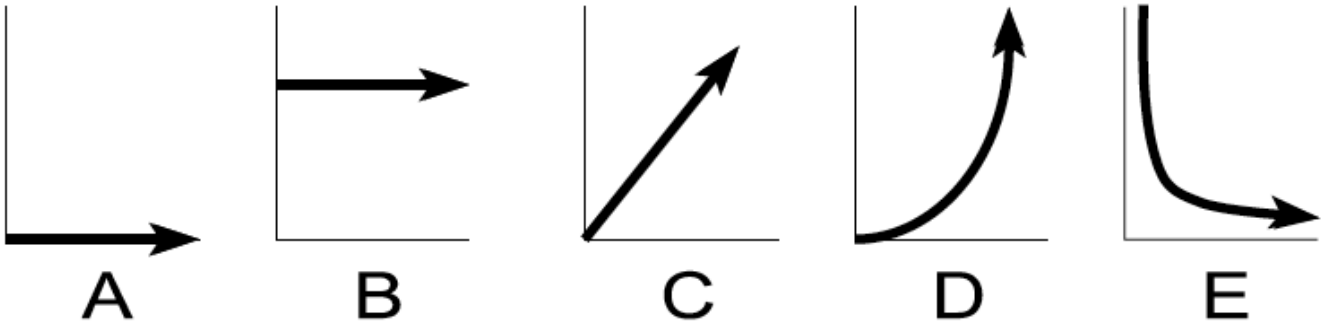


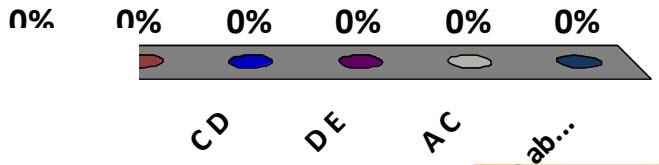
25

Countdown

Which two shapes fit a *position-time graph* of a motionless object?

1. A B
2. B C
3. C D
4. D E
5. A C
6. None of the above



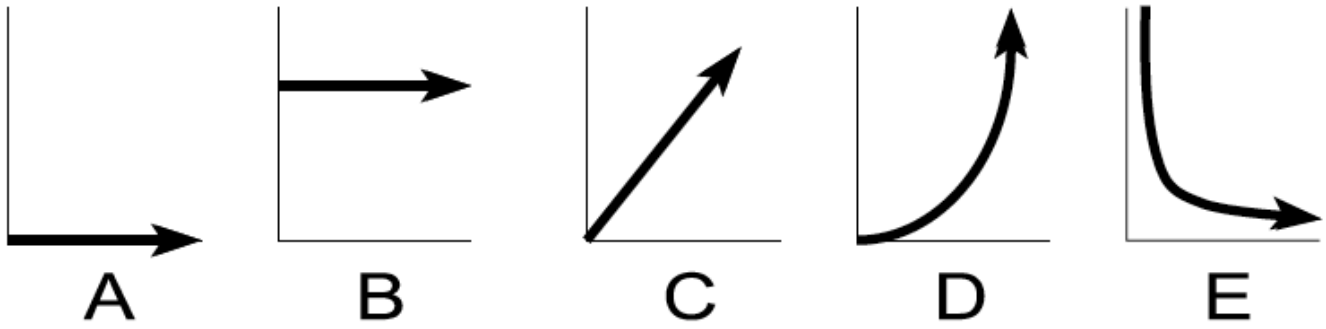


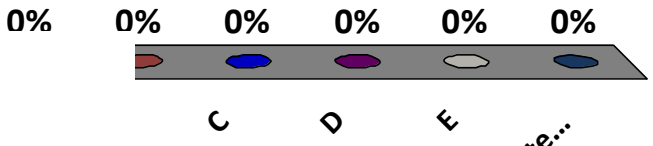
Team Scores

441.67	Team 1
400	Team 2
300	Team 3
300	Team 5
300	Team 4

Which shape fits a *velocity-time graph* of a motionless object?

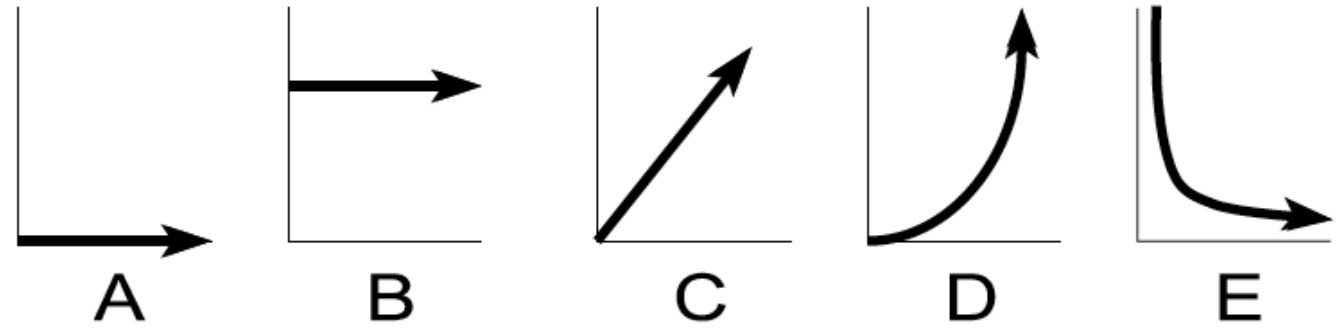
1. A
2. B
3. C
4. D
5. E
6. Cannot be determined

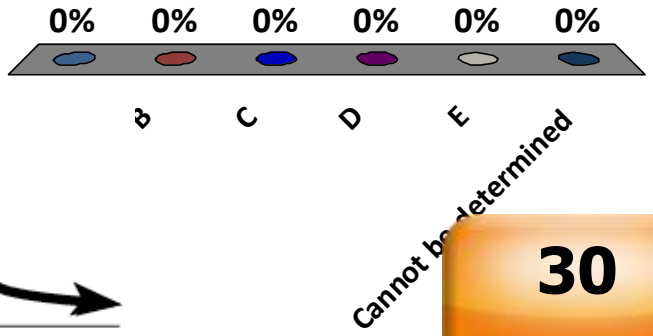




Which shape fits a *position-time graph* of an object that is moving at a constant velocity?

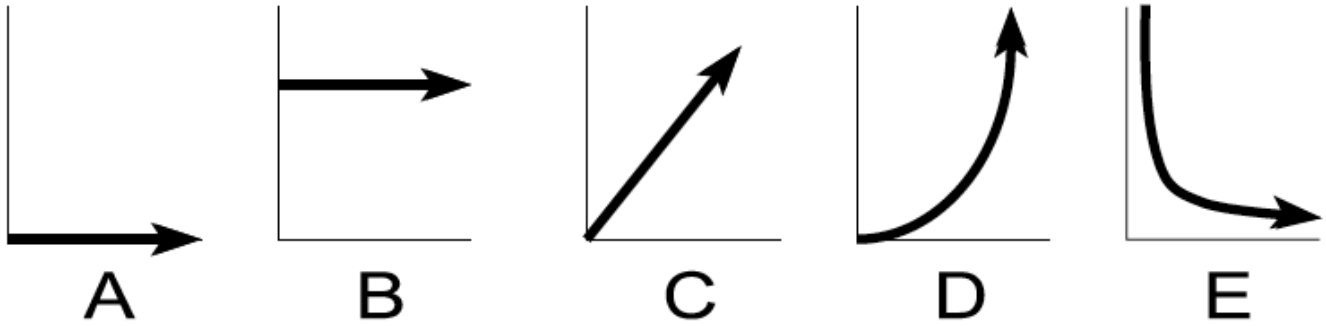
1. A
2. B
3. ✓ C
4. D
5. E
6. Cannot be determined

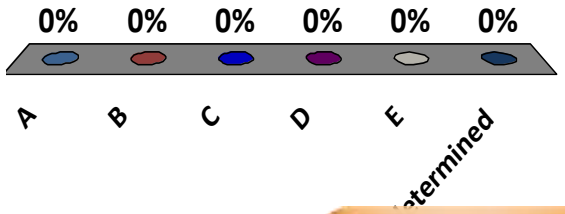




Which shape fits a *velocity time graph* of an object that is speeding up at a constant velocity?

1. A
2. B ✓
3. C
4. D
5. E
6. Cannot be determined

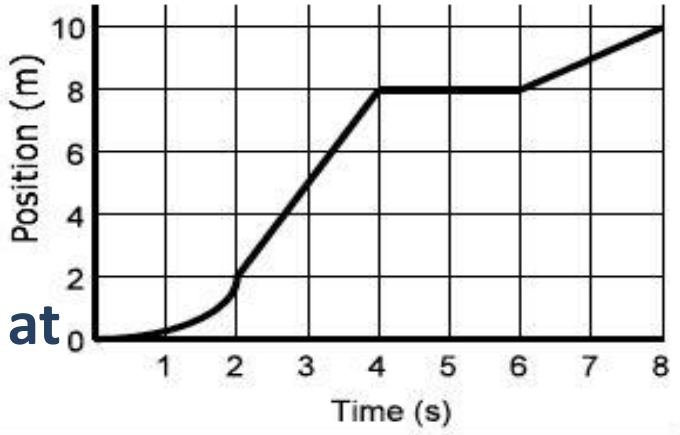




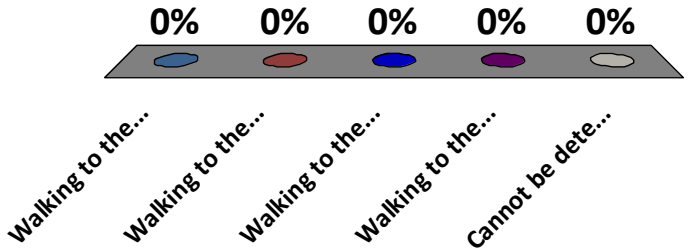
Team Scores

975	Team 1
925	Team 2
858.33	Team 5
816.67	Team 4
608.33	Team 3

A woman walks away from a starting position in a straight line. A position-time graph for her motion is shown to the right. Describe the woman's motion between 2 and 4 s.

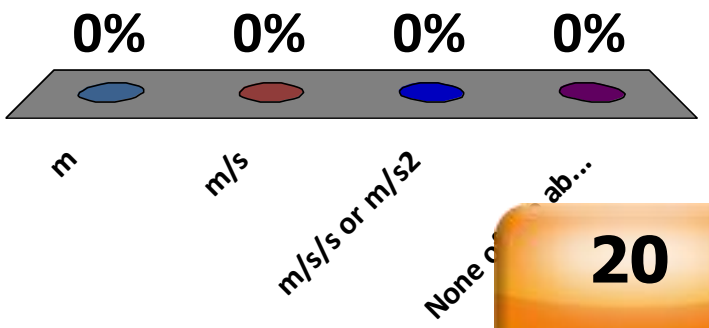


1. Walking to the east at a constant speed.
2. Walking to the west at a constant speed
3. Walking to the east at an increasing speed
4. Walking to the west at an increasing speed
5. Cannot be determine



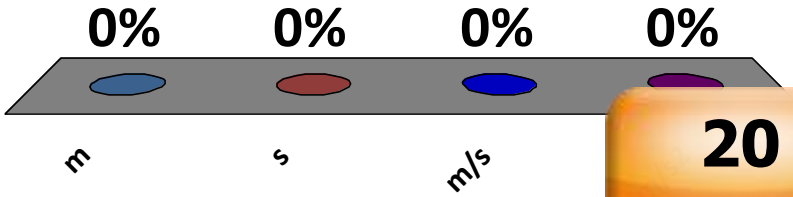
Which of the following units is equivalent to (meters per second) per second, and are the units of acceleration?

1. m
2. m/s
3. m/s/s or m/s^2 ✓
4. None of the above



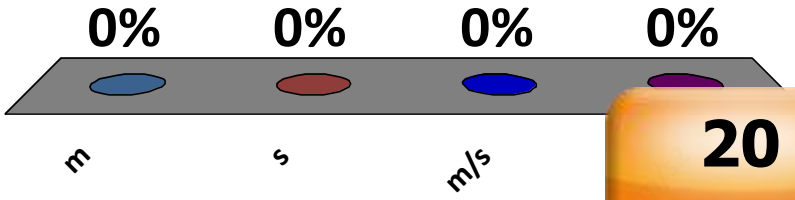
Which of the following units corresponds to the slope of a *position-time* graph?

1. m
2. s
3. m/s ✓
4. m/s^2



Which of the following units corresponds to the slope of a *velocity-time* graph?

1. m
2. s
3. m/s
4. m/s^2 ✓



20

Countdown

Final Team Scores

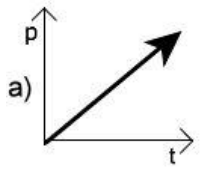
1350	Team 1
1258.33	Team 2
1198.33	Team 5
1183.33	Team 4
1008.33	Team 3

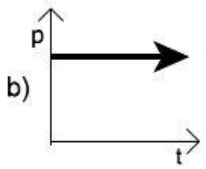
Pay attention to how much the time intervals are changing as the distance rises in 20m increments.

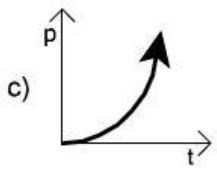
Distance (m)	Time (s)
0	0
20	4.5
40	6.3
60	7.7
80	8.9
100	10

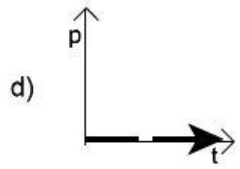
12. Which of the position-time graphs corresponds to the data table?

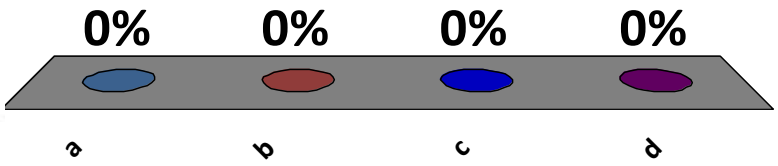
1. a
2. b
3. c
4. d





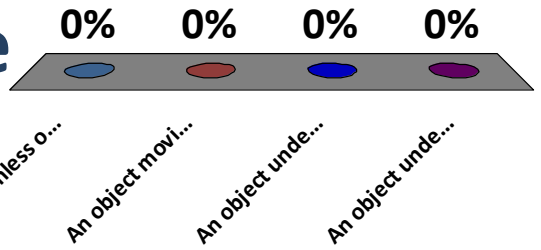


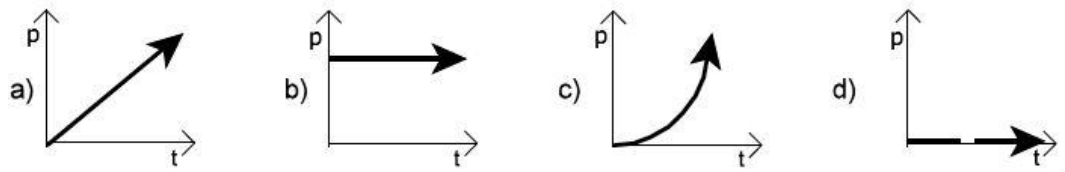




13. Which of the following descriptions matches the graph you selected in question 12?

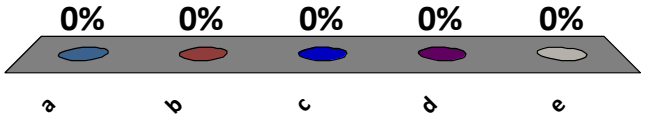
1. A motionless object
2. An object moving at a constant speed
3. An object undergoing positive acceleration
4. An object undergoing negative acceleration

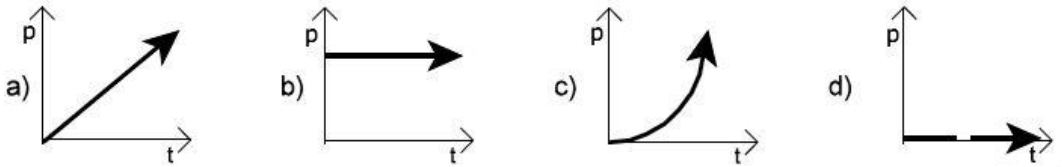




14. Which of the following velocity-time graphs corresponds to the data table?

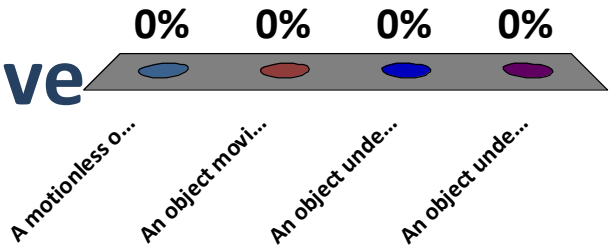
1. a
2. b
3. c
4. d
5. e

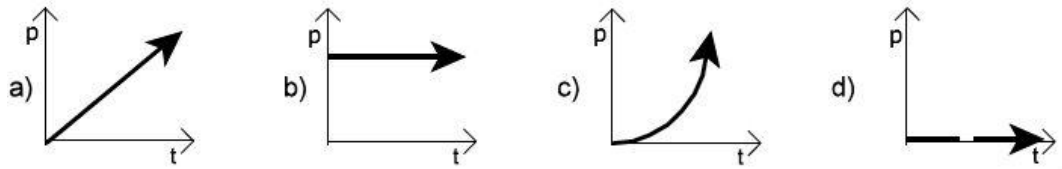




15. Which of the following descriptions matches the graph you selected in question 14?

1. A motionless object
2. An object moving at a constant speed
3. An object undergoing positive acceleration
4. An object undergoing negative acceleration





Team Scores

0	Team 1
0	Team 2
0	Team 3
0	Team 4
0	Team 5