Questions of the Day
CVP – Constant Velocity Particle

1

Question of the Day

- Where will you be the evening of Tuesday, March 10, 2020?
- Answer: *Physics Fair*

2

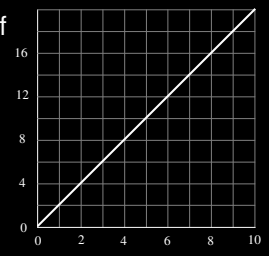
Question of the Day

- _____ is a measure of an object's location at a particular moment in time relative to a reference point.
- Answer: *Position*

3

Question of the Day

- What is the slope of the line?
- Answer: *2*

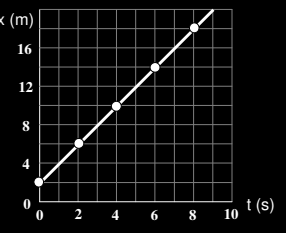


4

Question of the Day

- What is the specific equation for the line?
- Answer:

x = (2 m/s)·t + 2 m



5

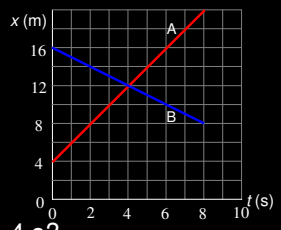
Question of the Day

- The slope on a *position*-vs.-*time* (*x*-vs.-*t*) graph represents _____, which is an object's _____ and _____.
- Answer: *velocity, speed, direction.*

6

Question of the Day

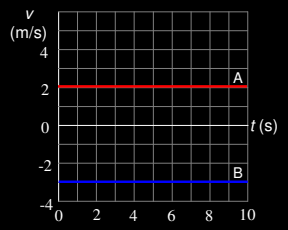
- Which object is going faster?
- What do the objects have in common?
- What is different about their motion?
- What happens at $t = 4$ s?



• Answer: A is going faster, both A & B have constant velocities, they are going in opposite directions, they start at different positions, they are at the same position at the same time at t = 4 s.

Question of the Day

- Describe the motion of objects A & B.
- Moving? Faster? Direction?
- *Answer: A has v = +2 m/s, B has v = -3 m/s; B is faster*



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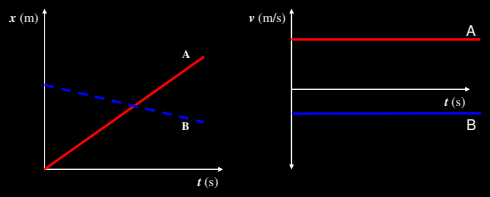
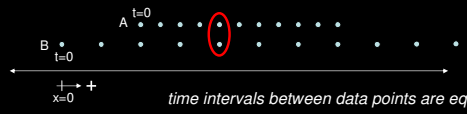


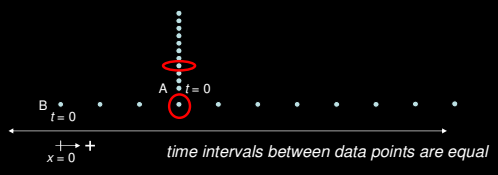
- Draw the corresponding **v** vs. **t** graph for objects A & B.

Question of the Day



- Which object is going faster?
- Which object has a head start?
- Does this object stay ahead?
- Are the objects ever at the same position at the same time? If so, when?
- *Answer: B is going faster, A has a head start, B catches up at t = 4 s*

Question of the Day



- How many seconds of data are represented?
- Compare the motion of A & B.
- Are A & B ever at the same place at the same time? If so, when?
- *Answer: 10 s of data, A is stationary, B has constant positive velocity, same place at t = 3 s*

Question of the Day

- Gidget the Chihuahua likes to go for pentagon shaped walks. If Gidget followed path ABCDE…
  - What was Gidget's total distance traveled?
  - What was Gidget's total displacement?
- Answer: distance = 20 m, *Δx = 5m West.*