Science 10

Monday May 15/17

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1. Assignment: Average Speed, Constant and Average Velocity
   Some still need to complete.

2. Check -> Worksheet: Position vs Time Graphs
   Answers are on the next few pages of this plan.

3. Acceleration - P4

4. Comparing Directions of Velocity and Acceleration - P1

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5. Sample Problems - Acceleration

6. Worksheet - Acceleration

7. Test - Physics Unit: Topics - Given
   -> Thursday or Friday this week

Science 10

Worksheet: Position vs Time Graphs

y x

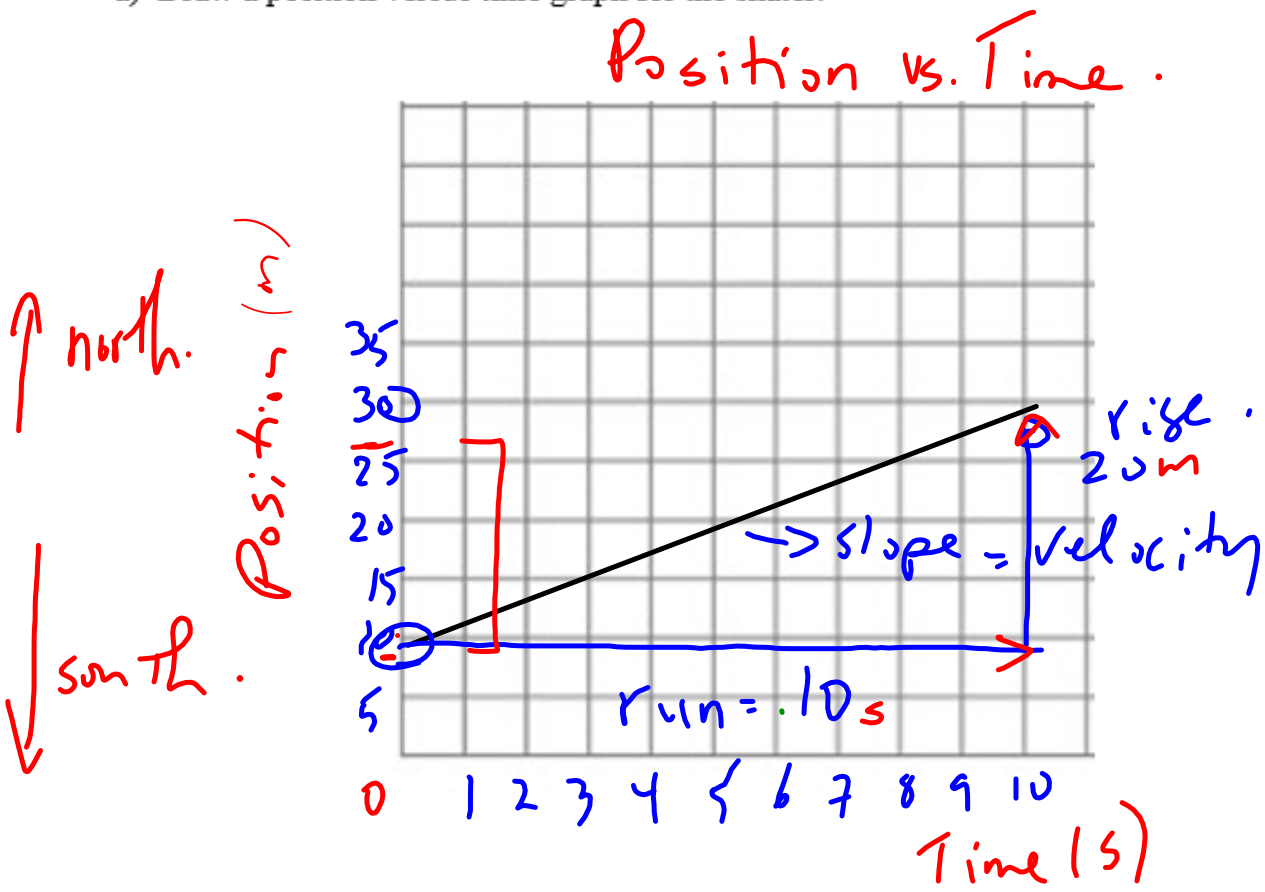
1. Robin, roller skating in a straight line north, was observed to be at the following positions at the following times:

x y

Time (s)	Position (m)
0.0	10
5.0	20
10.0	30

(0.0, 10)
(5.0, 20)
(10.0, 30)

a) Draw a position versus time graph for the skater.



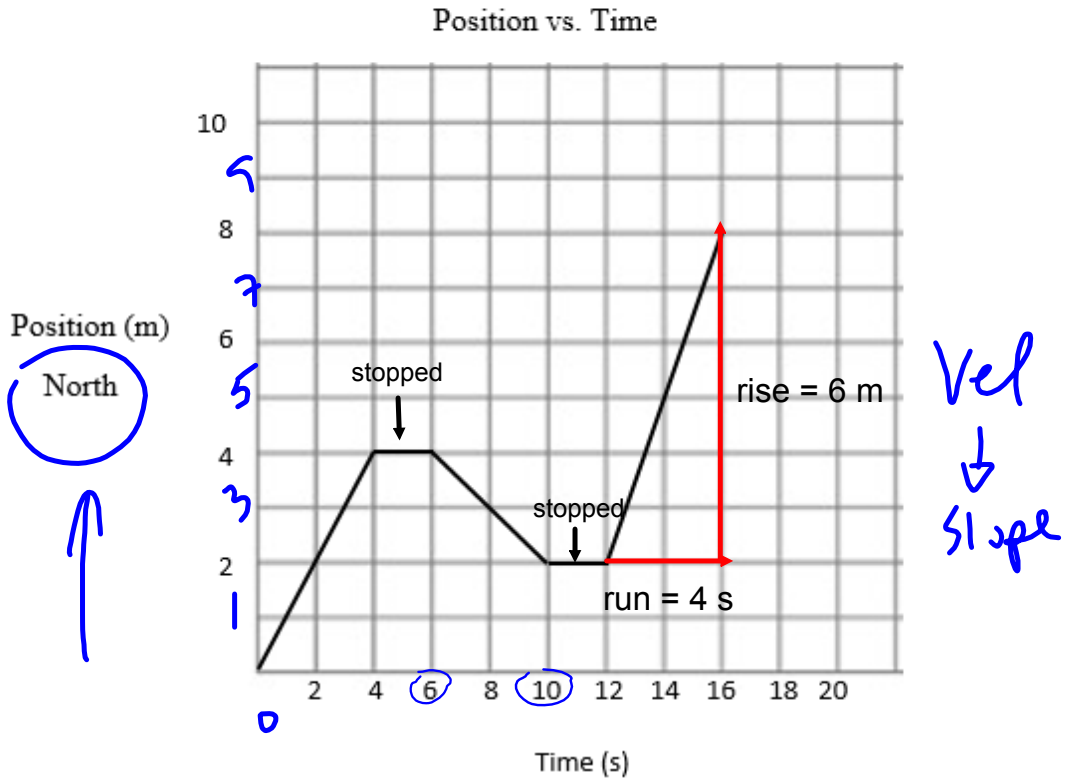
b) What type of motion does the skater have?

↳ linear motion → uniform motion → constant velocity

c) Calculate the velocity of the skater. Show your work.

$$\text{Slope} = \text{velocity} = \frac{\text{rise}}{\text{run}} = \frac{+20}{+10} = +2.0 \left(\frac{m}{s}\right)$$

2. A position-time graph for a second skater is shown below.



a) How many times did the skater stop?

2

b) During what time interval did the skater move in a negative direction?

6-10s

c) What type of motion did the skater have between t = 12 s and t = 16 s?

Uniform motion

d) What was the maximum displacement of the skater?

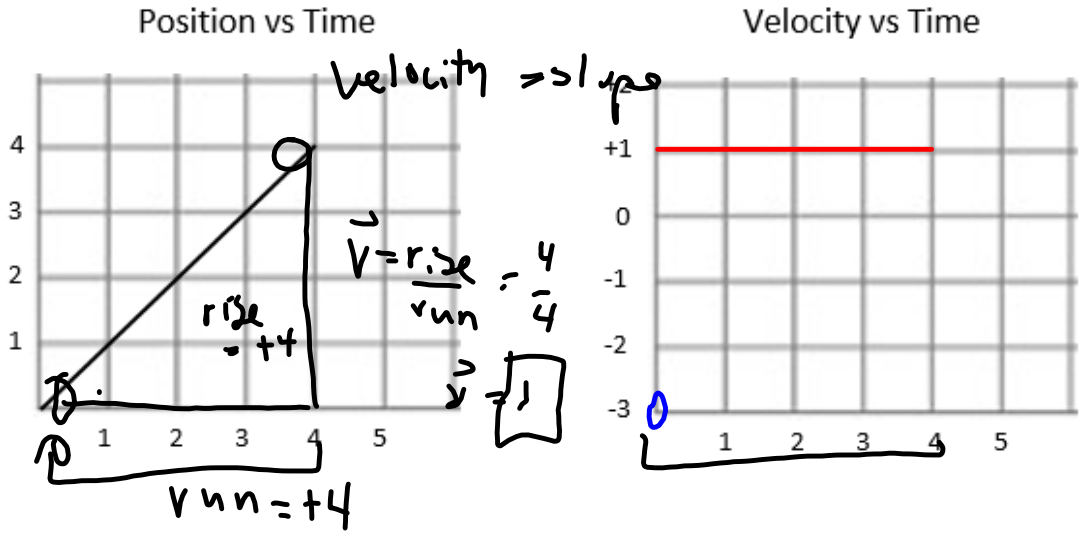
6m, north.

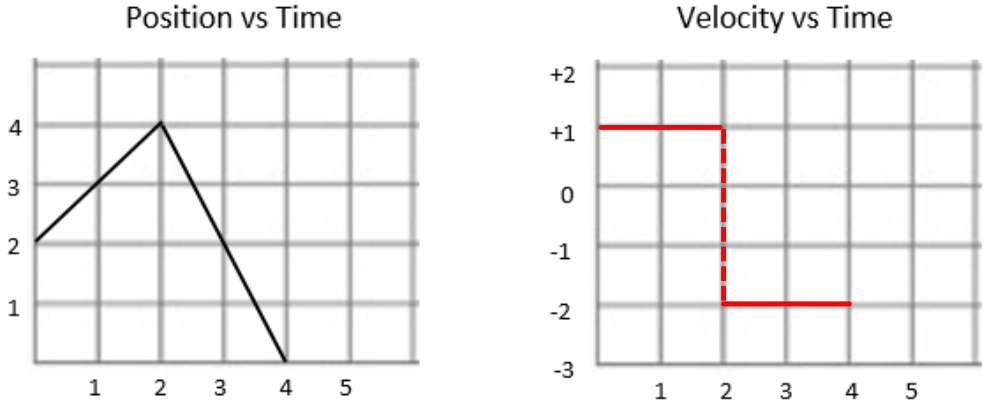
e) What was the maximum velocity of the skater?

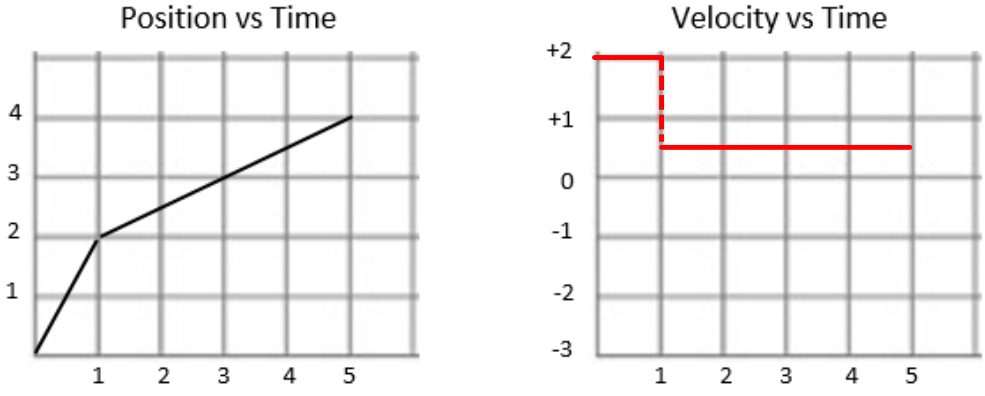
$$\text{velocity} = \frac{\text{rise}}{\text{run}} = \frac{6\text{ m}}{4\text{ s}} = +1.5\text{ m/s}$$

1.5 m/s north.

3. Draw the velocity vs time graphs for an object whose motion produced the position-time graphs shown below at the left.







Physics 112

Monday, May 15/17

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1. SA - U3S1 - Work, No Work, Etc.

2. Worksheet - Kinetic Energy and Kinetic-Energy Theorem
   Worksheet - GPE and Work-GPE Theorem

3. Hooke's Law - Continue

4. Elastic Limit

5. Elastic Potential Energy

6. Worksheet - Hooke's Law and Elastic Energy
   Worksheet - Work, Types of Energy and Work-Energy Theorems

7. Concept Sheet
   U3S3 - Systems and Energy Conservation

Physics 122

Monday, May 15/17

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Progress Reports

1. Questions?
   Worksheet ->Text: Page 536, PP #1-8

2. Projectiles Fired at an Angle - Continue

3. Examples

4. Worksheets - Projectiles - HW

5. SA - SHM and Projectiles
   Tentatively Thursday, May 17/17