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## Date

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## UNIT II: Review

1. Consider the position vs time graph at right.
a. Determine the velocity of the object.
b. Write the mathematical model (starting with $y=m x+b$ ) to describe the motion of the object.

2. Shown at right is a velocity vs time graph for an object.
a. Describe the motion of the object.
b. Draw the corresponding position vs time graph. Number the x - axis.
c. How far did the object travel in the interval $\mathrm{t}=1 \mathrm{~s}$ to $\mathrm{t}=2 \mathrm{~s}$ ?
d. What is the total displacement? Explain how you got the answer.

3. Johnny drives to Wisconsin (1920 miles) in 32 hours. He returns home by the same route in the same amount of time.
a. Determine his distance traveled and average speed.
b. Determine his displacement and average velocity.
c. Compare these values and explain any differences.
4. Consider the v vs t graph below.

a. Describe the behavior of the object depicted in the graph.
b. Graphically represent the displacement of the object. What was the overall displacement (each square represents $1 \mathrm{~m} / \mathrm{s}$ on the velocity axis and 1 sec on the time axis)?
5. A race car travels at a speed of $95 \mathrm{~m} / \mathrm{s}$. How far does it travel in 12.5 s ? Use the appropriate mathematical expression and show how units cancel.
