Jeopardy

Graphing	Vocabulary	Convert…	Rate Eqn…	Measuring
Q $100	Q $100	Q $100	Q $100	Q $100
Q $200	Q $200	Q $200	Q $200	Q $200
Q $300	Q $300	Q $300	Q $300	Q $300
Q $400	Q $400	Q $400	Q $400	Q $400
Q $500	Q $500	Q $500	Q $500	Q $500

Final Jeopardy
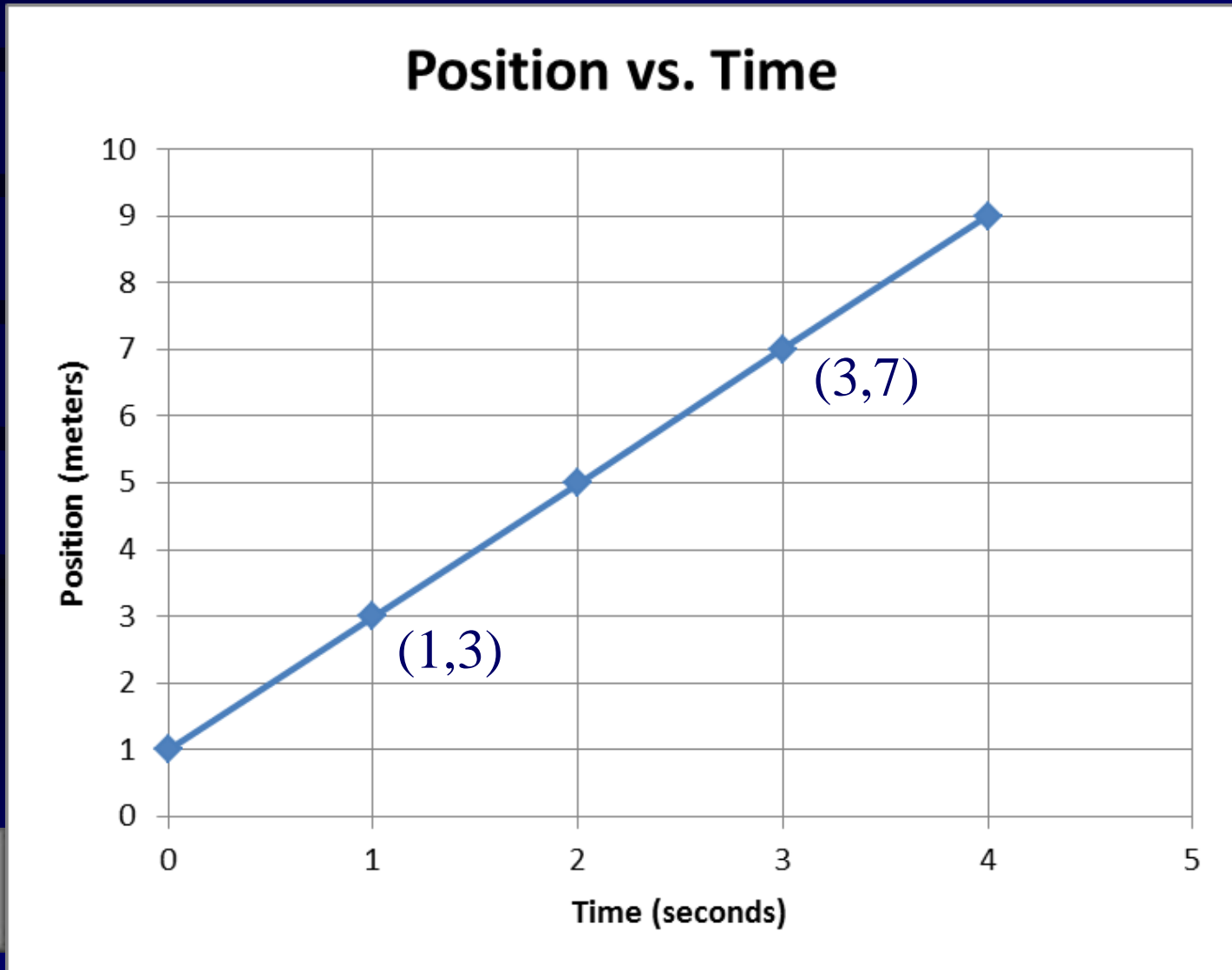
Estimate the position at time = 2.5 seconds.

Position vs. Time

Position (meters) vs. Time (seconds)
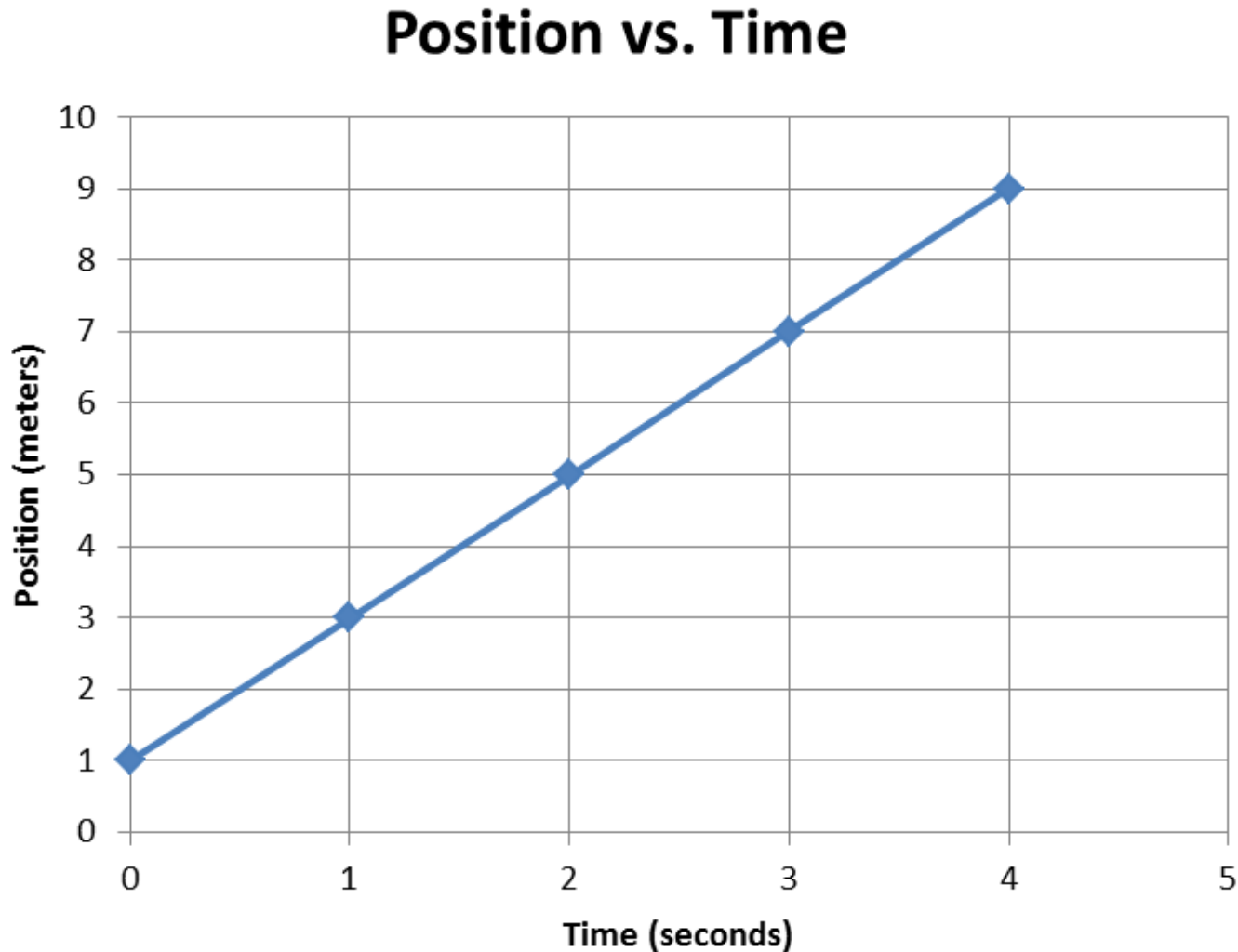
$100 Graphing Answer

6 meters

Using the 2 points shown, calculate the slope of the line of best fit.

Position vs. Time

$200 Graphing Answer
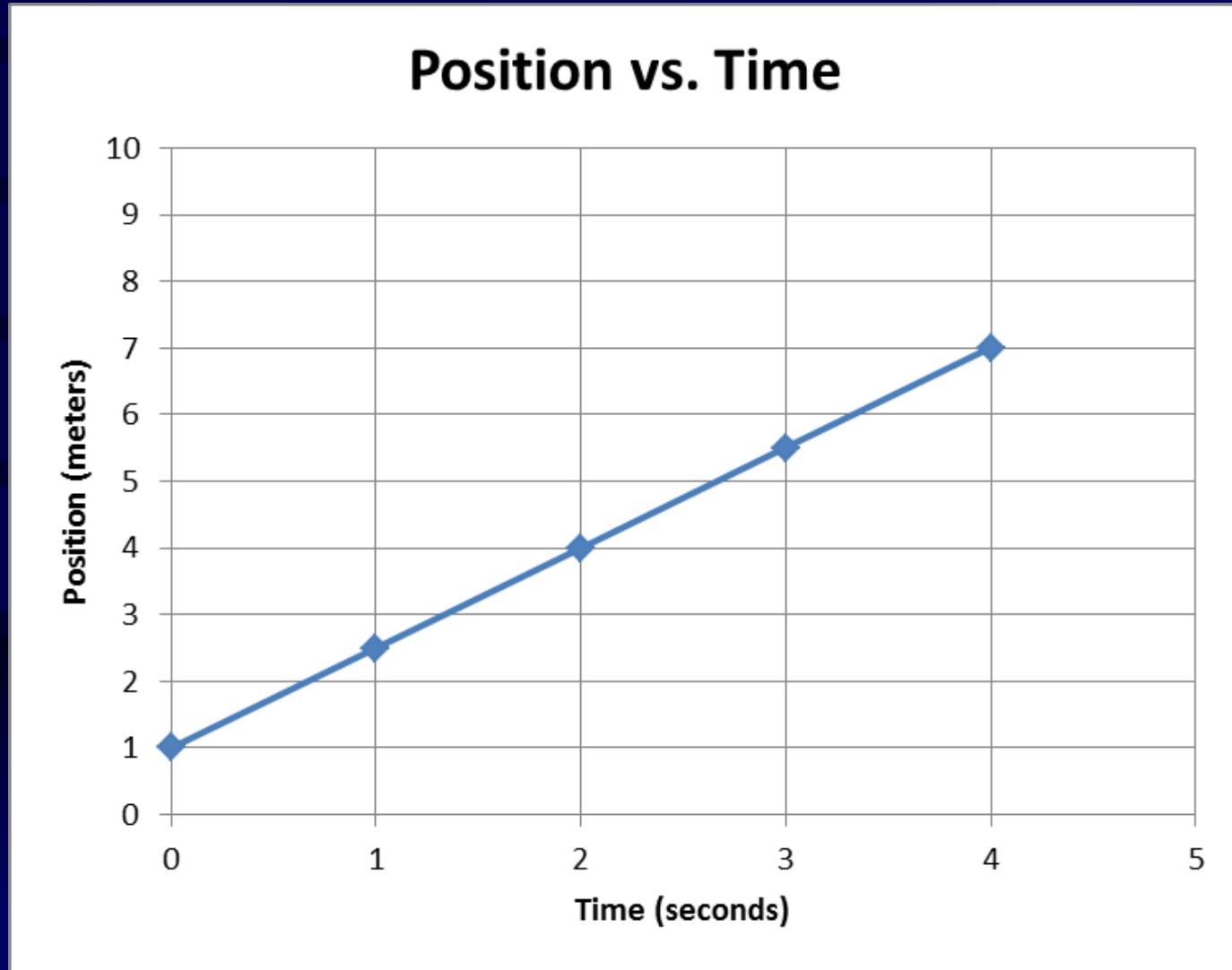
2 m/s

What does the slope of a Position vs Time graph represent?

$300 Graphing Answer

Velocity

Use the table on the left to calculate the slope of the line of best fit.

Time	Position
0	1
1	2.5
2	4
3	5.5
4	7

Position vs. Time

$400 Graphing Answer

1.5 m/s

The independent variable is usually graphed on the _____, while the dependent variable is usually graphed on the _____.

$500 Graphing Answer

The independent variable is usually graphed on the _x-axis_, while the dependent variable is usually graphed on the _y-axis_.

A factor that effects the results of an experiment is called a _____.

$100 Vocabulary Answer

Variable

A _____ is a rule every process in the universe obeys.

$200 Vocabulary Answer

Natural Law

Something that is large enough to be measured directly is considered to be _____.

$300 Vocabulary Answer

Macroscopic

This step in the experimental process is an educated guess that predicts the relationship between the independent and dependent variables.

$400 Vocabulary Answer

Hypothesis

This word is used to mean
"for every" or "for each"

$500 Vocabulary Answer

per

How many centimeters is your desk if it is 1.4 meters wide?

$100 Converting Answer

140 cm

How many seconds are there in 3 hours?

$200 Converting Answer

10,800 seconds

How many kilometers is 5500 meters?

$300 Converting Answer

5.5 km

How many meters are there in 10 feet?

1 meter = 3.28 feet

$400 Converting Answer

3.05 meters

What is the speed of a car in miles/hour, if it is traveling at 1.2 miles per minute?

$500 Converting Answer

72 miles/hour

A car travels down the road at 40 miles/hour. How far will it travel in 18 minutes?

What is this questions looking for?

Looking for	Solution
Given	
Relationships/Formula	

$100 Rate Equation Answer

Looking for	Solution
$d = ?$	
Given	
Relationships/Formula	

A car travels down the road at 40 miles/hour. How far will it travel in 18 minutes?

What is given in this problem?

Looking for	Solution
Given	
Relationships/Formula	

$200 Rate Equation Answer

Looking for	Solution
Given $v = 40$ mi/h $t = 18$ min	
Relationships/Formula	

A car travels down the road at 40 miles/hour. How far will it travel in 18 minutes?

What formula relates the variables?

Looking for	Solution
Given	
Relationships/Formula	

$300 Rate Equation Answer

Looking for	Solution
Given	
Relationships/Formula $$d = v\,t$$	

A car travels down the road at 40 miles/hour. How far will it travel in 18 minutes?

Use Dimensional Analysis to make the units of the given variables agree.

$400 Rate Equation Answer

t = 0.3 hours

OR

v = 0.67 miles/minute

A car travels down the road at 40 miles/hour. How far will it travel in 18 minutes?

Solve!

Looking for	Solution
$d = ?$	
Given $v = 40 \text{ mi/h}$ $t = 0.3 \text{ h}$	
Relationships/Formula $d = v\,t$	

$500 Rate Equation Answer

Looking for	Solution
$d = ?$	$d = (40 \text{ mi/h})(0.3 \text{ h})$
Given $v = 40 \text{ mi/h}$ $t = 0.3 \text{ h}$	$\boxed{d = 12 \text{ miles}}$
Relationships/Formula $d = v\,t$	

What are the names of the two most common measurement systems?

$100 Measuring Answer

Metric System &
English System

How many millimeters are in one meter?

$200 Measuring Answer

1000

List the following from largest to smallest…

Meter
Centimeter
Kilometer
Millimeter

$300 Measuring Answer

Kilometer
Meter
Centimeter
Millimeter

Which measurement system to scientists prefer to use?

$400 Measuring Answer

Metric System

The width of the white board is closest to…?

a) 500 millimeters

b) 4 meters

c) 70 centimeters

d) 2 kilometers

$500 Measuring Answer

4 meters

Final Jeopardy

A bicyclist goes down a steep hill at 20 m/s. How many minutes does it take him to travel 2.2 km to the bottom of the hill?

Looking for	Solution
Given	
Relationships/Formula	

A bicyclist goes down a steep hill at 20 m/s. How many minutes does it take him to travel 2.2 km to the bottom of the hill?

Looking for	Solution
$$t = ?$$	$$t = (2200\text{m})/(20\text{ m/s})$$ $$t = 110 \text{ sec}$$
Given $$v = 20 \text{ m/s}$$ $$d = 2.2 \text{ km} = 2200 \text{ m}$$	
Relationships/Formula $$t = d/v$$	$$\boxed{t = 1.83 \text{ min}}$$