Motion Remediation

Vocabulary – fill in the information for each vocabulary frame.

Speed

Definition:

Example:

Picture:

Sentence:

Velocity

Definition:

Example:

Picture:

Sentence:

Reference Point

Definition:

Example:

Picture:

Sentence:

Motion

Definition:

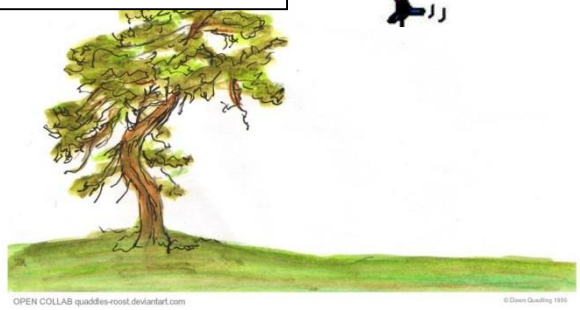
Example:

Picture:

Sentence:

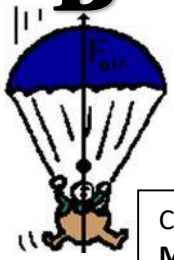
Relative Motion – compare Skydiver A to the each reference point. Circle whether Skydiver A is in motion or not. Include an explanation.

Compared to the tree:
MOTION or NO MOTION
Explanation -



A

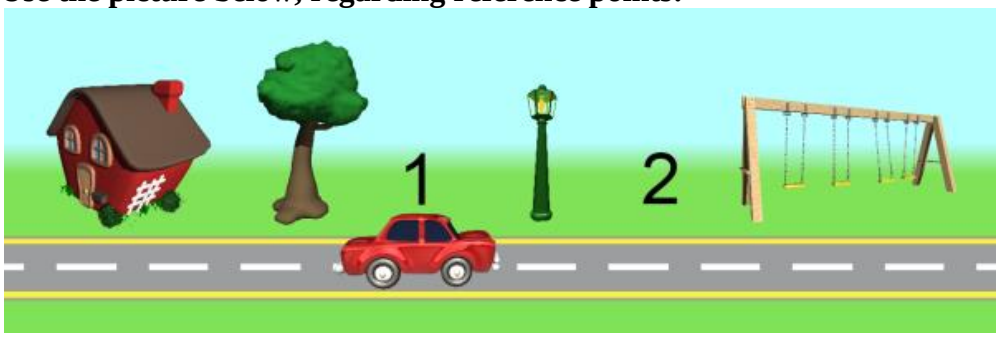
B



Compared to the airplane:
MOTION or NO MOTION
Explanation -

Compared to Skydiver B:
MOTION or NO MOTION
Explanation -

Use the picture below, regarding reference points:

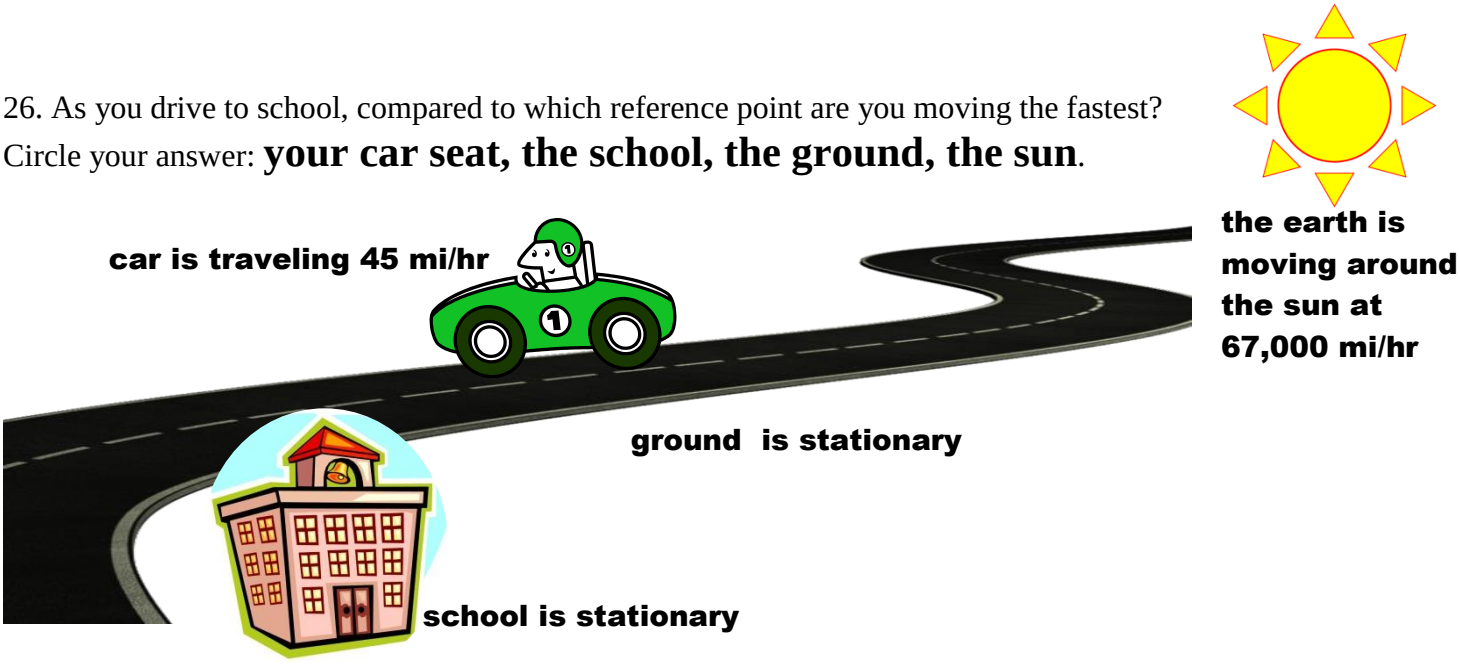


First, draw an arrow showing motion of the car.

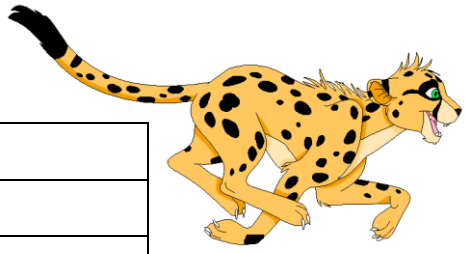
- Which object(s) is the car getting FARTHER away from?
- Which object(s) is the car getting CLOSER to?
- Which object(s) is the car getting closer to and then farther away from?

By picking different reference points, how does this affect the motion of the car?

26. As you drive to school, compared to which reference point are you moving the fastest?
Circle your answer: **your car seat, the school, the ground, the sun**.



Put the following speeds in order from fastest to slowest:



.5 km/hr	
20.25 km/hr	
25 km/hr	
4 km/hr	
.25 km/hr	
2.6 km/hr	
.678 km/hr	
65 km/hr	
20 km/hr	

What is the equation for speed?

SPEED =

How will you remember the equation for speed? (Make up a memory trick.)

Calculating Speed – for each of the following you MUST show your work, including the equation you used to calculate speed.

Word Problems

1. A train travels 558 miles from North Carolina to Ohio. The trip takes 9 hours. What is the speed of the train?

2. A plane can go from Charlotte, NC to Akron, OH in 1.5 hours. The distance between the airports is 600 miles. What is the speed of the airplane?

3. What is Greg's speed if he can ride his bike 1,075 meters in 5 minutes?

Data Tables

Use the information about the motion of 3 different objects in the data table below to answer the questions.

Object A		Object B		Object C	
Time (s)	Position (m)	Time (s)	Position (m)	Time (s)	Position (m)
0	0	0	0	0	0
2	1	2	4	2	2
4	2	4	8	4	4
6	3	6	12	6	10.5
8	4	8	16	8	14
10	5	10	20	10	20

1. Calculate each object's speed at 4 seconds. Circle the object that is going the fastest.

Object 1 –

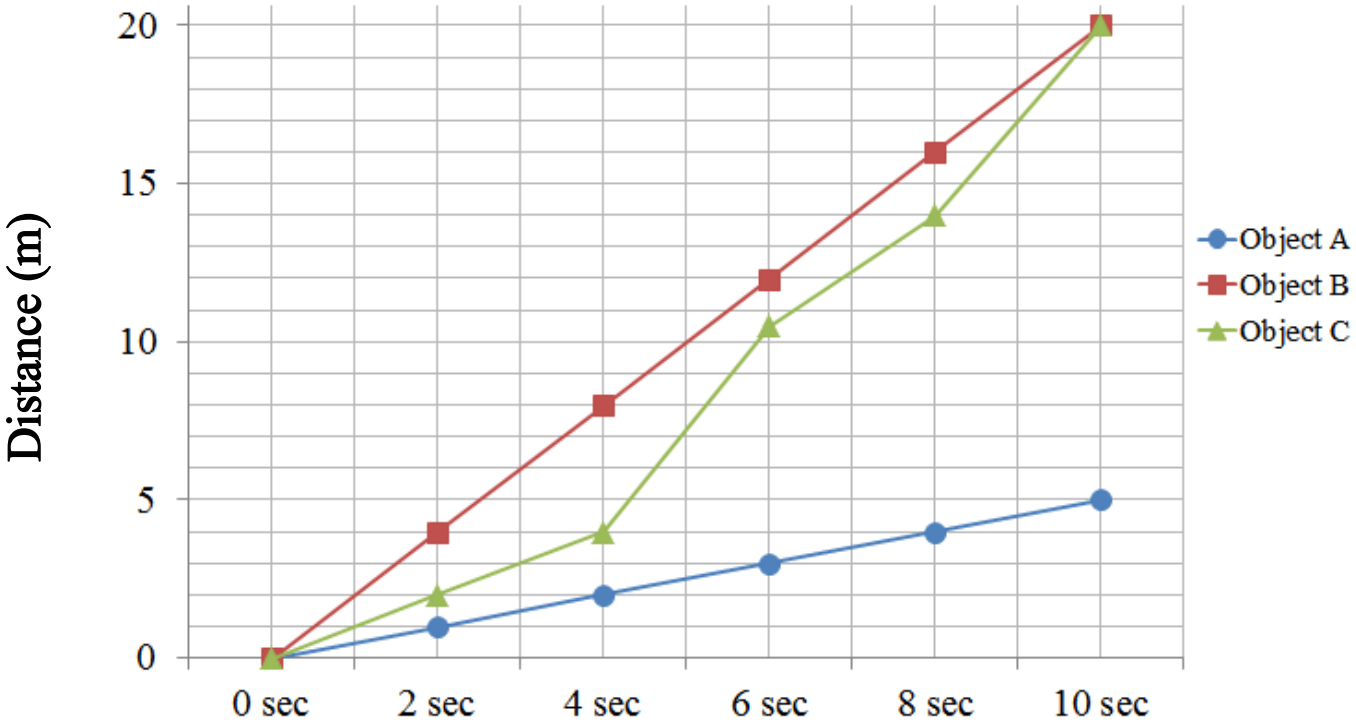
Object 2 –

Object 3 –

2. Which object is going the slowest at the end?

3. At what time is Object C going the fastest?

Graphs



1. Which object is traveling the slowest? How do you know this?

2. Calculate the speed of each object at 8 seconds.

Object 1 –

Object 2 –

Object 3 –

3. How far has object B traveled in 3 seconds?

4. If object A continues at a constant speed, how far will the object be at 11 seconds?

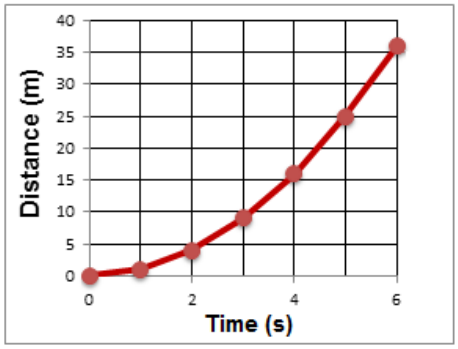
5. Which object(s) are traveling at a constant speed? How do you know this?

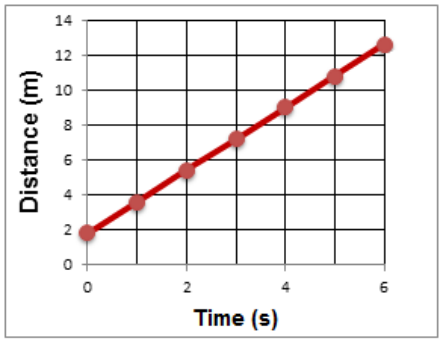
6. Which object(s) are traveling at a changing speed? How do you know this?

7. How long does it take object C to travel 14 meters?

A changing slope indicates a _____ speed.

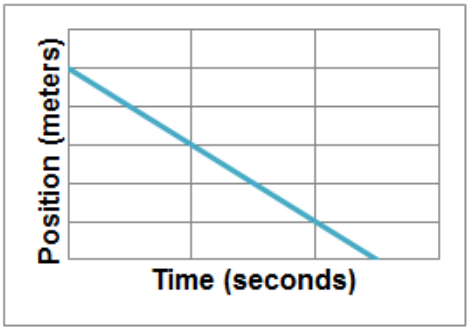
A constant slope indicates a _____ speed.

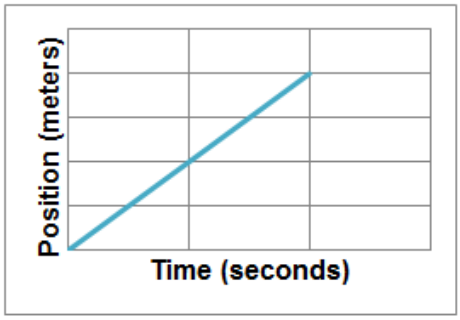




A negative slope indicates that the object is approaching you.

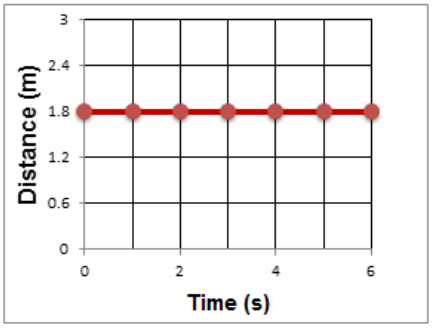
A positive slope indicates that the object is getting farther from you.

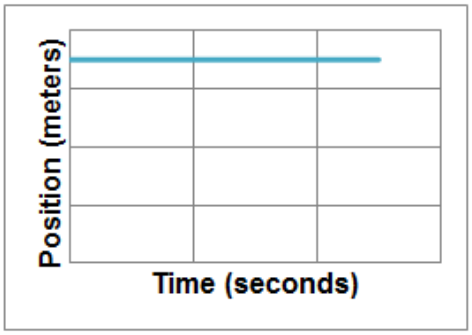


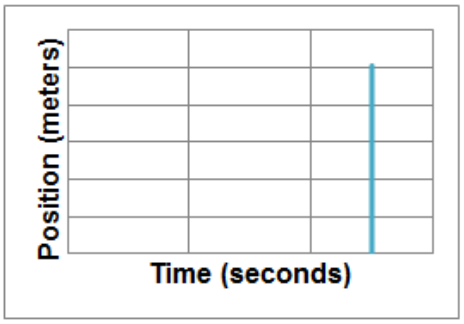


A _____ indicates there is ___ _____ (the object is stationary).

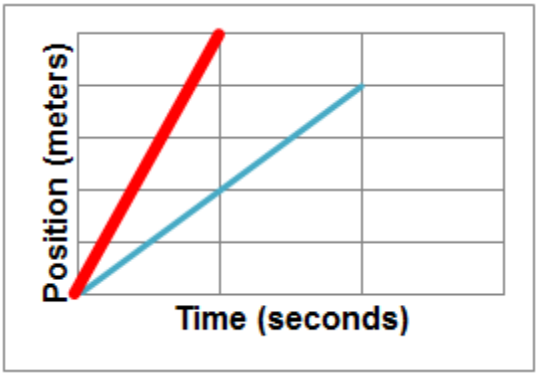
There will NEVER be a _____ line.

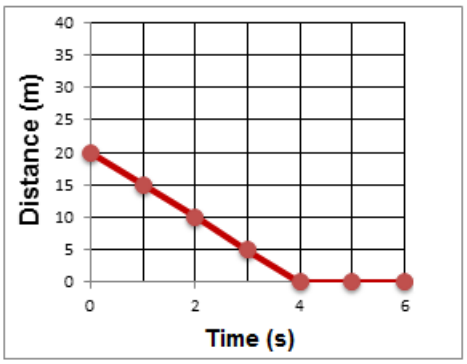






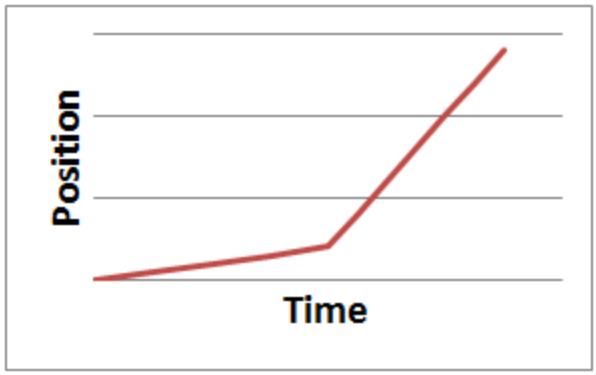
A _____ slope indicates a faster speed.
A lower slope indicates a _____ speed.

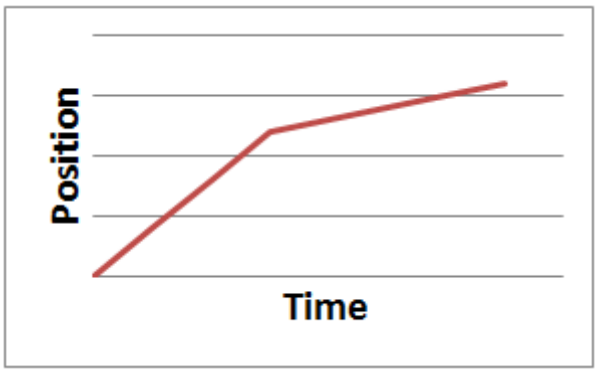




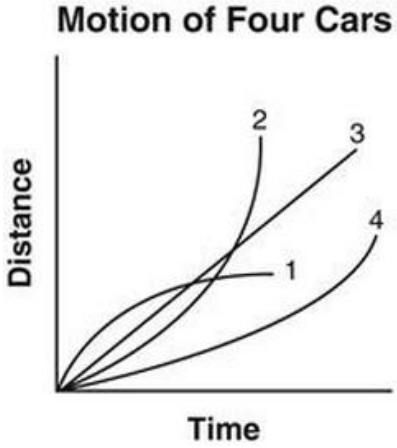
1. What is happening to the motion of the object between seconds 4 and 6?

2. Circle the graph that shows a slower speed at the beginning and a faster speed at the end. What does the other graph show?

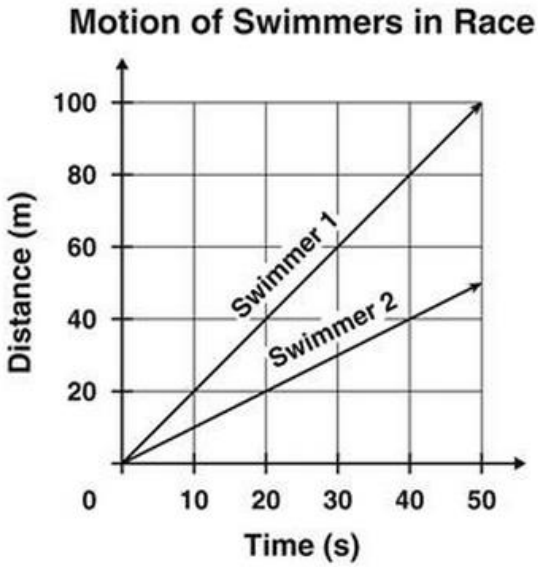




3. Which line shows a constant speed?

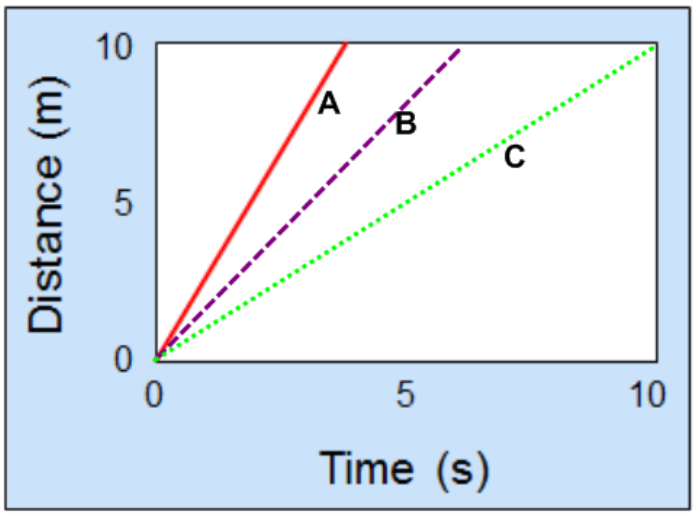


4. Which swimmer is faster? Calculate each swimmer's speed.



Swimmer 1 Speed –

Swimmer 2 Speed –



5. Which line shows the slowest speed? How do you know?