



 Name _____

Pretest

In the picture below, two airplanes are flying on different routes.

The World Airlines plane has flight number **WAL27**.
The speed of Flight WAL27 is $\frac{1}{2}$ foot/second.

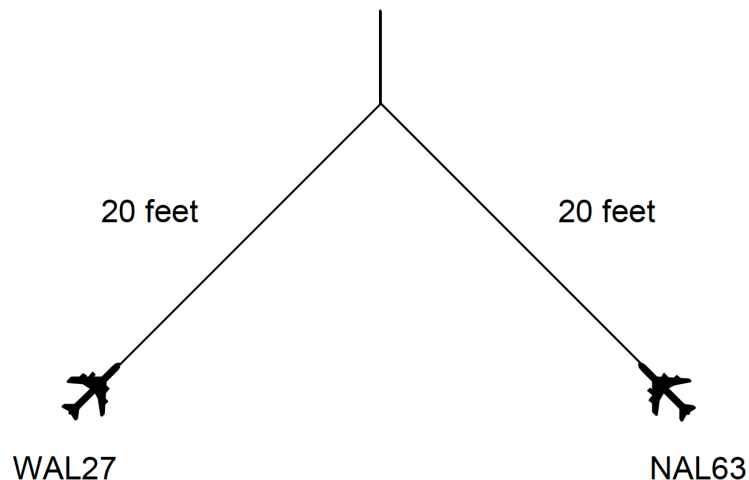
The National Airlines plane has flight number **NAL63**.
The speed of Flight NAL63 is $\frac{1}{3}$ foot/second.

Flight WAL27 is 20 feet away from the point where the two routes intersect (meet).
Flight NAL63 is 20 feet away from the point where the two routes intersect.

1. Do you think the two planes will meet at the point where the two routes intersect? _____

Why or why not? _____

2. If not, how many feet apart do you think the planes will be when the first plane reaches the point where the routes intersect?





 Name _____

Posttest

In the picture below, two airplanes are flying on different routes.

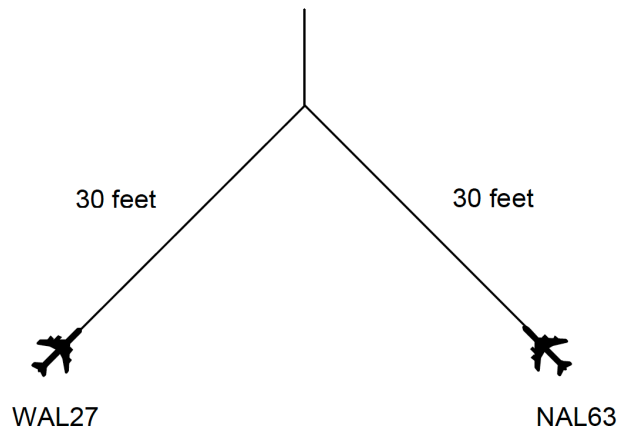
The speed of Flight WAL27 is 1 foot/second.

Flight WAL27 is 30 feet from the point where the two routes intersect.

The speed of Flight NAL63 is $\frac{2}{3}$ foot/second.

Flight NAL63 is 30 feet from the point where the two routes intersect.

The separation standard is 5 feet.



1. Do you think the two planes will meet at the point where the two routes intersect? _____

Why or why not? _____

2. If not, how many feet apart do you think the planes will be when the first plane reaches the point where the routes intersect? _____



Name

3. Does your answer to Question 2 meet the 5-foot separation standard? _____

4. If you think two planes will not meet the 5-foot separation standard, what could you tell the air traffic controllers to do to make sure that the separation standard will be met?

Now consider this general problem.

Two planes are traveling at different speeds on two different routes.
The planes are the same distance from the point where the two routes intersect.

5. Will the planes meet at the point where the routes intersect? _____

6. Now suppose the difference in speeds is twice as great. What would you expect to happen to the separation distance at the point where the routes come together?

Why? _____



Name _____

Lines and Grid

