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 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  $\frac{1}{2}$  foot/second.

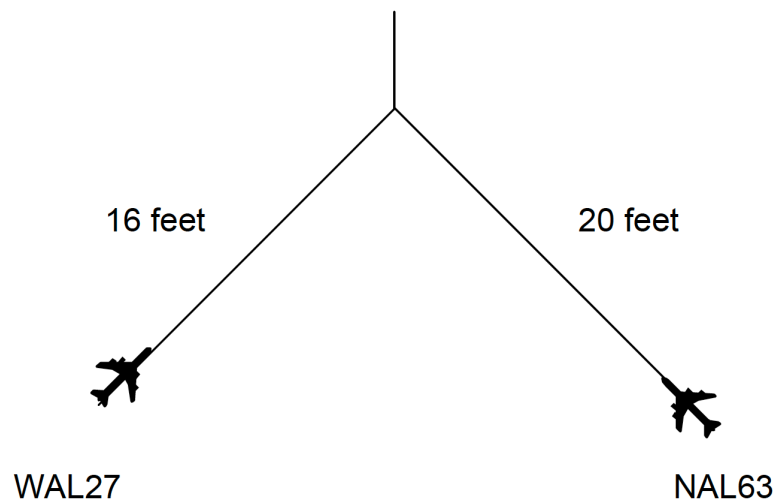
Flight WAL27 is 16 feet away from the point where the two routes intersect (meet).  
Flight NAL63 is 20 feet away from the point where the two routes intersect.

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?  
\_\_\_\_\_






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 Name \_\_\_\_\_

### Posttest

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

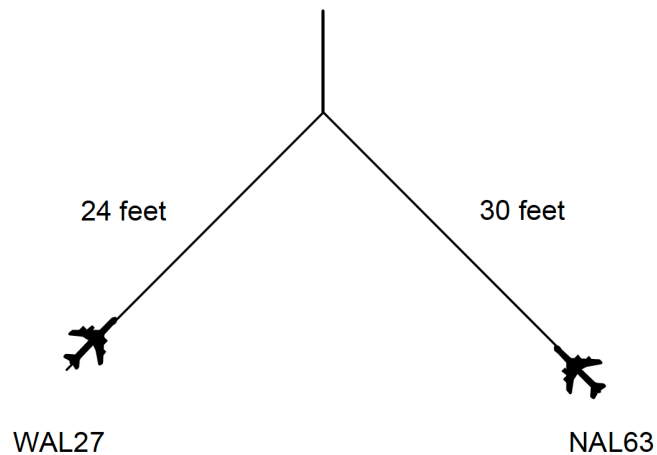
The speed of Flight WAL27 is 1 foot/second.

Flight WAL27 is 24 feet from the point where the two routes intersect.

The speed of Flight NAL63 is 1 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? \_\_\_\_\_



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

4. If you think two planes will meet, what could you tell the air traffic controllers to do to avoid a collision?

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Now consider this general problem.

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

5. Will the planes meet at the point where the routes intersect?
6. If not, how far apart will the planes be when the first plane reaches the point where the routes intersect?

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7. Explain your answers.

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Name \_\_\_\_\_

### Lines and Grid

