

Design Recipe

A rocket leaves Earth, headed for Mars at 80 miles per second. **At the exact same time**, an asteroid leaves Mars traveling towards Earth, moving at 70 miles per second. If the distance from the Earth to Mars is 50,000,000 miles, how long will it take for them to meet?

I. Contract+Purpose Statement

Every contract has three parts:

<u>collide</u>	:	<u>Number</u>	->	<u>Number</u>
name		Domain		Range

Given the distance between a rocket (moving at 80mi/sec) & asteroid (70mi/sec), when will they collide?
What does the function do?

II. Give Examples

Write an example of your function for some sample inputs

<u>collide(0)</u>	is	<u>0 / 150</u>
Use the function here		What should the function produce?

<u>collide(2000)</u>	is	<u>2000 / 150</u>
Use the function here		What should the function produce?

<u>collide(5000)</u>	is	<u>5000 / 150</u>
Use the function here		What should the function produce?

<u>collide(15000)</u>	is	<u>15000 / 150</u>
Use the function here		What should the function produce?

III. Definition

Write the function, giving variable names to all your input values.

```
fun collide ( distance ) :    distance / 150  
end
```