Word Problem: rocket-collide

Directions: *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?*

Contract and Purpose Statement ☐

Every contract has three parts...

rocket-collide ::   Number   ->   Number

function name   *domain*   *range*

Given the distance between a rocket (moving at 80mi/s) and an asteroid

what does the function do?

Examples ☐

Write some examples, then circle and label what changes...

examples:

rocket-collide (0   ) is   0 / (70 + 80)

function name   *input(s)*   *what the function produces*

rocket-collide (2000   ) is   2000 / (70 + 80)

function name   *input(s)*   *what the function produces*

rocket-collide (15000   ) is   15000 / (70 + 80)

function name   *input(s)*   *what the function produces*

rocket-collide (50000000   ) is   50000000 / (70 + 80)

function name   *input(s)*   *what the function produces*

end

Definition ☐

Write the definition, given variable names to all your input values...

fun rocket-collide (distance   ):

function name   *variables*

    distance / (70 + 80)

what the function does with those variables

end