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%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% NAME: abraham reines
% JMU-EID: reinesaj
% DATE: Feb 2, 2022
%
% PROGRAM: pythag.m
% PURPOSE:  Find the special pythagorean triplet Dr. Lucas needs.
% CREDIT: Adapted from an example written by Dr. Lucus
%
% VARIABLES:
%    a = less than b, 1:1000
%    b = less than c, a + 1:1000
%    c = equal to a^2 + b^2
%
% JMU PLEDGE
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%


for a=1:1000 % Somewhere in there between 1 and 1000
    for b=a+1:1000 % The additional part after a has been found
        c = 1000-(a+b); % The remainder after a and b are found
        if c > b && a^2 + b^2 == c^2 % Conditions for pythagorean triplet
            fprintf("a = %d\n", a) % Print a
            fprintf("b = %d\n", b) % Print b
            fprintf("c = %d\n", c) % Print c
        end
    end
end

%pythag
%a = 200
%b = 375
%c = 425
```

```
a = 200
b = 375
c = 425
```

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