MTH2210A-RAPPORT DE LABORATOIRE

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Laboratoire 5: ÉQUATIONS NON LINÉAIRES

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Question (a)

Conditions initiales:

```
z0(1) = 6;
z0(2) = 200;
% Système d'équations:
type('fleche')
```

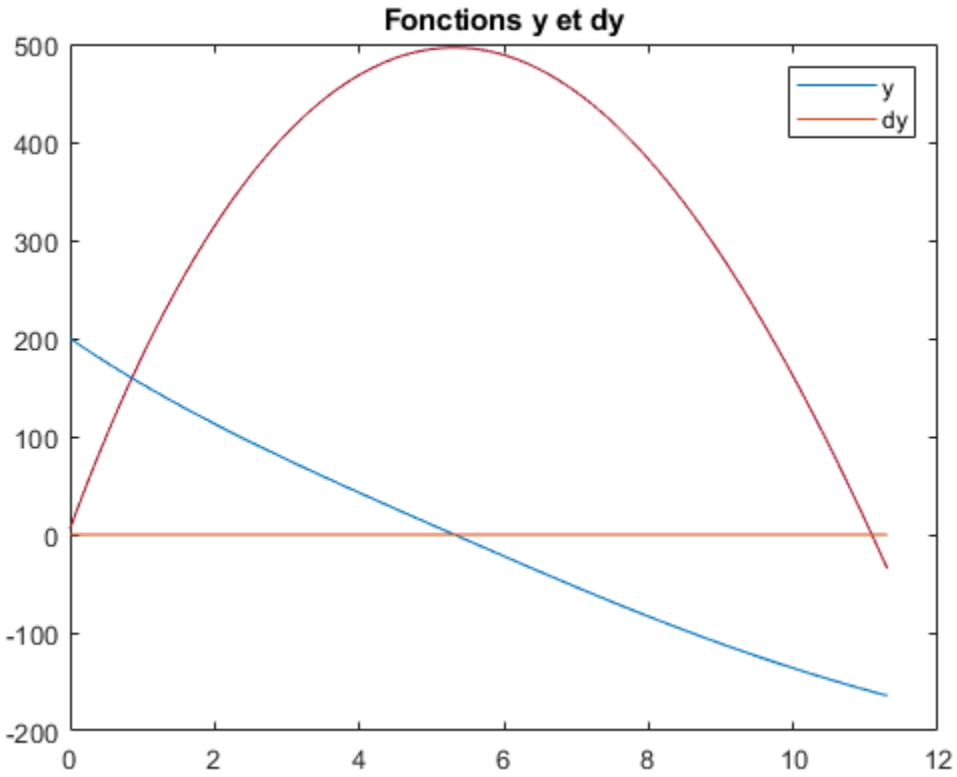
```
function [f] = fleche(t, z)
k = 0.83e-6;
m = 0.001781163;
g = 32.17;
f(1) = z(2);
f(2) = (-k* abs(z(2))*z(2) - m*g)/m;
end
```

Question (b)

i)

```
t = [0, 11.3];

[temps , y] = rk4('fleche' , t , [6;200] , 1000);
figure(1)
plot(temps, y)
hold on
plot(temps, zeros(size(temps)))
legend('y', 'dy')
title('Fonctions y et dy')
```

```
%ii

% Selon le graphique, la flèche atteint le sol au temps t = 11,15 s.
for i = 1:size(temps)
   %if temps == 11.15

end

%vSol = y(
```



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