```
function [y1 y2 y3] = rk5(h,a,b,y1_boundary,y2_boundary,y3_boundary)
n = (b-a)/h;%number of intervals
y1 = zeros(n+1,1);% initialising values of y1
y2 = zeros(n+1,1);% initialising values of y2
y3 = zeros(n+1,1);% initialising values of y3
y1(1) = y1 boundary;
y2(1) = y2\_boundary;
y3(1) = y3\_boundary;
for i= 1:n
    y1k1 = f1(y1(i), y2(i));
    y2k1 = f2(y1(i), y2(i));
    y3k1 = f3(y2(i));
    y1k2 = f1(y1(i)+y1k1*(h/4),y2(i)+y2k1*(h/4));
    y2k2 = f2(y1(i)+y1k1*(h/4),y2(i)+y2k1*(h/4));
    y3k2 = f3(y2(i)+y2k1*(h/4));
    y1k3 =
 f1(y1(i)+y1k1*(h/8)+y1k2*(h/8),y2(i)+y2k1*(h/8)+y2k2*(h/8));
    y2k3 =
 f2(y1(i)+y1k1*(h/8)+y1k2*(h/8),y2(i)+y2k1*(h/8)+y2k2*(h/8));
    y3k3 = f3(y2(i)+y2k1*(h/8)+y2k2*(h/8));
    y1k4 = f1(y1(i) - y1k2*(h/2) + y1k3*h, y2(i) - y2k2*(h/2) + y2k3*h);
    y2k4 = f2(y1(i)-y1k2*(h/2) +y1k3*h,y2(i)-y2k2*(h/2) +y2k3*h);
    y3k4 = f3(y2(i)-y2k2*(h/2) +y2k3*h);
    y1k5 =
 f1(y1(i)+y1k1*(3*h/16)+y1k4*(9*h/16),y2(i)+y2k1*(3*h/16)+y2k4*(9*h/16));
    y2k5 =
 f2(y1(i)+y1k1*(3*h/16)+y1k4*(9*h/16),y2(i)+y2k1*(3*h/16)+y2k4*(9*h/16));
    y3k5 = f3(y2(i)+y2k1*(3*h/16)+y2k4*(9*h/16));
    y1k6 = f1(y1(i) - y1k1*(3*h/7) + y1k2*(2*h/7) + y1k3*(12*h/7) -
y1k4*(12*h/7)+y1k5*(8*h/7), y2(i)-y2k1*(3*h/7)+y2k2*(2*h/7)+
 y2k3*(12*h/7)-y2k4*(12*h/7)+y2k5*(8*h/7));
    y2k6 = f2(y1(i)-y1k1*(3*h/7) + y1k2*(2*h/7) + y1k3*(12*h/7)-
y1k4*(12*h/7)+y1k5*(8*h/7),y2(i)-y2k1*(3*h/7)+y2k2*(2*h/7)+
 y2k3*(12*h/7)-y2k4*(12*h/7)+y2k5*(8*h/7));
    y3k6 = f3(y2(i)-y2k1*(3*h/7) + y2k2*(2*h/7) + y2k3*(12*h/7)-
y2k4*(12*h/7)+y2k5*(8*h/7));
    y1(i+1) = y1(i) + (1/90)*(7*y1k1 + 32*y1k3 + 12*y1k4
 +32*y1k5+7*y1k6)*h;
    y2(i+1) = y2(i) + (1/90)*(7*y2k1 + 32*y2k3 + 12*y2k4
 +32*y2k5+7*y2k6)*h;
    y3(i+1) = y3(i) + (1/90)*(7*y3k1 + 32*y3k3 + 12*y3k4
 +32*y3k5+7*y3k6)*h;
end
end
Not enough input arguments.
```

```
Error in rk5 (line 2)
n = (b-a)/h;%number of intervals
```

Published with MATLAB® R2021a