```
% Set Three Equations:
% -3x + 4y + 5z = 6
% -2x + 2y - 4z = -3
% 2y - z = 1

A = [-3, 4, 5;
    -2, 2, -4;
    0, 2, -1];

b = [6; -3; 1];

n = length(b);
x = [0; 0; 0];
max_iter = 10;

disp('Iteration   x       y       z');
disp('-----------------------------------');

for k = 1:max_iter
   x_old = x;

   x(1) = (b(1) - (A(1,2)*x(2) + A(1,3)*x(3))) / A(1,1);
   x(2) = (b(2) - (A(2,1)*x(1) + A(2,3)*x(3))) / A(2,2);
   x(3) = (b(3) - (A(3,1)*x(1) + A(3,2)*x(2))) / A(3,3);

   disp([k, x(1), x(2), x(3)]);
```

```
    if any(abs((x - x_old) ./ x) * 100 > 1000)
        disp('Values are diverging. The solution does not converge.');
        break;
    end
end
```