

Wednesday 24 September

Quiz 05 Group Quiz

NAME(s): _____

Find the solution to the following system of four linear equations

$$\begin{aligned}5x + 4y - 2z + 6w &= 4 \\3x + 6y + 6z + 4.5w &= 13.5 \\6x + 12y - 2z + 16w &= 20 \\4x - 2y + 2z - 4w &= 6\end{aligned}$$

Answer

$$\begin{aligned}x &= \underline{\underline{-0.6667}} \\y &= \underline{\underline{31.6667}} \\z &= \underline{\underline{-11.3333}} \\w &= \underline{\underline{-23.6667}}\end{aligned}$$

```
>> coeff = [5 4 -2 6; ...  
            3 6 6 4.5; ...  
            6 12 -2 16; ...  
            4 -2 2 -4 ];  
>> rhs = [4; 13.5; 20; 6];  
>> soln = coeff\rhs
```

```
soln =  
  
-0.6667  
31.6667  
-11.3333  
-23.6667
```

```
>> check = coeff*soln
```

```
check =  
  
4.0000  
13.5000  
20.0000  
6.0000
```