$$\frac{1}{k} + \frac{1}{j} = \frac{1}{2} \qquad (1)$$

✓ when $j=2$ $\quad \frac{1}{k} = \frac{1}{2} - \frac{1}{2} = 0$

∴ There are no solns for $j=2$

✓ $k=j=4$ is a soln since $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$.

Then $E = \frac{kF}{2} = \frac{4\times 1}{2} = 2$

$$V = \frac{kF}{j} = \frac{4\times 1}{4} = 1$$

For other solns one of k, j is greater than 4 and one is less than 4. But $j \geq 2$, and if $j=2$ $1/k = 0$ which is not a soln. ∴ The only possible soln $j<4$ is $j=3 \Rightarrow 1/k = 1/2 - 1/3 = 1/6$

✓ $\Rightarrow k=6$. Since (1) is symmetric in j and k, $k=3, j=6$ is also a soln

✓ of this eqtn.

$j=3 \quad k=6 \quad (F=1)$

$E = \frac{kF}{2} = \frac{6\times 1}{2} = 3$

$V = \frac{kF}{j} = \frac{6\times 1}{3} = 2$ ✓

$j=6 \quad k=3$

$V = \frac{kF}{j} = \frac{3\times 1}{6} = \frac{1}{2}$

$E = \frac{kF}{2} = \frac{3\times 1}{2} = \frac{3}{2}$

Since V, E are required to be integers, the last soln does not correspond to a surface.

7/7 ✓