symmetricality

when we added the five equations:

(1): $b+c+d+e=4$
(2): $a+c+d+e=5$
(3): $a+b+d+e=1$
(4): $a+b+c+e=2$
(5): $a+b+c+d=0$

we obtain:

(6): $4(a+b+c+d+e)=12$

dividing by 4 we get:

(7): $a+b+c+d+e=3$

as we subtract (1), (2), (3), (4) and (5) from (7) we get

&: (8): $a=-1$
(9): $b=-2$
(10): $c=2$
(11): $d=1$
(12): $e=3$

~~Asymmetric:~~

when we multiply the three equations:

(1): $xy=1$
(2): $yz=4$
(3): $zx=9$

we obtain:

(4): $x^2y^2z^2=36$

as we square root we obtain:

(5): $xyz=\pm 6$

as we divide (5) by (1), (2) and (3) we get

(6): $z=\pm 6$
(7): $x=\pm 1.5$
(8): $y=\pm 2/3$

where x y and z are all positive or all negative

when we multiply the 5 equations:

(1): $ab=1$
(2): $bc=2$
(3): $cd=3$
(4): $de=4$
(5): $ea=6$

we obtain:

(6): $a^2b^2c^2d^2e^2=144$

as we square root we obtain:

(7): $abcde=\pm 12$

If we divide by (7) by (1) and (3); (2) and (4); (3) and (5); (4) and (1); and (5) and (2) we get

(8): $a = \pm\frac{2}{5}\ \pm\frac{3}{2}$

(9): $b = \pm 2$

(10): $c = 3^3$

(11): $d = 1$

(12): $e = \pm 4$

where a, b, c, d and e are all positive or all negative