19.
$$\phi[x + y, x \log(x + y) - z] = 0$$

19.
$$\phi[x+y, x \log(x+y)-z] = 0$$
 20. $\phi[x^2 + \frac{1}{2}e^y + x - z, 2x + y] = 0$

21.
$$\phi(x + y + z, xyz) = 0$$

22.
$$\phi [x^2 + y^2, ye^{(x^2 + y^2)} - z] = 0$$

21.
$$\phi(x + y + z, xyz) = 0$$
 22. $\phi[x^2 + y^2, ye^{(x^2 + y^2)} - z] = 0$
23. $\phi\left[xy + yz + zx, \frac{x - y}{y - z}\right] = 0$ 24. $\phi\left[\frac{y}{z}, \frac{x^2 + y^2 + z^2}{z}\right] = 0$

24.
$$\phi \left[\frac{y}{z}, \frac{x^2 + y^2 + z^2}{z} \right] = 0$$

 $x^2 + y^2 + z^2 + \lambda (x + y + z) = \lambda_1$, Spheres passes through the plane.