Section 8.5: systems on non-linear equations

Solve the following systems of equations. Be sure to check your answers.

1) $4x + y = 2$
   $x^3 - 2 + y = 0$

2) $x + y = 0$
   $x^3 - 5x - y = 0$

3) $-2x + y = -5$
   $x^2 + y^2 = 25$

4) $3x + y = 5$
   $x^2 + y^2 = 5$

5) $x^2 + y = 0$
   $8x^2 - 4x - y = 0$

6) $x + y^2 = 0$
   $y^3 - 5x - 6y = 0$

7) $y = -2x^2 + 2$
   $y = 2x^4 - 4x^2 + 2$

8) $y = x^3 - 3x^2 + 4$
   $y = -2x + 4$

9) $3x + y = -4$
   $x^2 + y = 0$

10) $x - 2y = 1$
    $3x - y^2 = 8$

11) $x^2 - y = 0$
    $x - y = 0$

12) $x - y = 4$
    $x^2 + y^2 = 26$

13) $y = -x$
    $y = x^3 + 4x^2 + 2x$

14) $y = -x$
    $y = x^3 + 5x^2 + 3x$

15) $x - 7y + 6 = 12$
    $x^2 - y^2 = 36$

16) $x + 2y = 0$
    $x^2 - y^2 = 3$

17) $x - 7y + 6 = -4$
    $x^2 + y^2 = 20$

18) $x + 2y = 4$
    $x^2 - y^2 = 3$

19) $3x + y = 8$
    $x^2 - 2 + y = 6$

20) $x + y = 3$
    $x^2 - 5x - y = -7$