

## E Summer Quadratic Simultaneous

1. Solve  $\begin{cases} y + x = 3 \\ x^2 + y^2 = 5 \end{cases}$ . (1, 2) or (2, 1)
  2. Solve  $\begin{cases} y - x = 4 \\ y^2 - x^2 = 8 \end{cases}$ . (-1, 3)
  3. Solve  $\begin{cases} y = 2x + 4 \\ 4x^2 + 4 = y \end{cases}$ .  $(\frac{1}{2}, 5)$  or (0, 4)
  4. Solve  $\begin{cases} y - 3x = 8 \\ 2x^2 - y^2 = 17 \end{cases}$ . (-3, -1) or  $(-\frac{27}{7}, -\frac{25}{7})$
  5. Solve  $\begin{cases} x = 2y + 3 \\ x^2 + xy = 0 \end{cases}$ . (1, -1) or  $(0, -\frac{3}{2})$
  6. Solve  $\begin{cases} y + x = 1 \\ x^2 + y^2 = \frac{5}{9} \end{cases}$ .  $(\frac{1}{3}, \frac{2}{3})$  or  $(\frac{2}{3}, \frac{1}{3})$
  7. Solve  $\begin{cases} y = 4x^2 + 1 \\ 3x = 8x + 2 \end{cases}$ .  $(\frac{1}{2}, 2)$  or  $(\frac{1}{6}, \frac{10}{9})$
  8. Solve  $\begin{cases} y = 3x - 2 \\ x^2 + y^2 = 20 \end{cases}$ . (2, 4) or  $(\frac{4}{5}, \frac{2}{5})$
  9. Solve  $\begin{cases} y = 3x + 1 \\ 3x + y^2 = 5 \end{cases}$ .  $(\frac{1}{3}, 2)$  or  $(-\frac{4}{3}, -3)$
  10. Solve  $\begin{cases} 2x + 3y = 8 \\ x^2 + y^2 = 5 \end{cases}$ . (1, 2) or  $(\frac{19}{13}, \frac{22}{13})$
  11. Solve  $\begin{cases} x + y = 2 \\ y^2 - x^2 = 3 \end{cases}$ .  $(\frac{1}{4}, \frac{7}{4})$
  12. Solve  $\begin{cases} x + y = 2 \\ 2x^2 + y^2 = 3 \end{cases}$ . (1, 1) or  $(\frac{1}{3}, \frac{5}{3})$
  13. Solve  $\begin{cases} 2x + y = 1 \\ x^2 - y^2 = -1 \end{cases}$ . (0, 1) or  $(\frac{4}{3}, -\frac{5}{3})$
  14. Solve  $\begin{cases} 3y = x - 5 \\ 2x^2 + y^2 = 6 \end{cases}$ . (-1, -2) or  $(\frac{29}{19}, -\frac{22}{19})$
  15. Solve  $\begin{cases} 3x + y = 6 \\ x^2 - xy - y^2 + 11 = 0 \end{cases}$ . (1, 3) or (5, -9)
  16. Solve  $\begin{cases} y = 2x + 2 \\ 4x^2 + y^2 = 74 \end{cases}$ .  $(\frac{5}{2}, 7)$  or  $(-\frac{7}{2}, 5)$
- HARDER FROM NOW ON...
17. Solve  $\begin{cases} y = x^2 + 3 \\ x^2 + y^2 = 17 \end{cases}$ . (1, 4) or (-1, 4)
  18. Solve  $\begin{cases} 3x + 2y = 8 \\ x^2 - 2y^2 + xy = 4 \end{cases}$ . (2, 1) or  $(\frac{18}{5}, -\frac{7}{5})$