

① $y = x^2$
 $y = 3x - 2$

$x^2 = 3x - 2$
 $x^2 - 3x + 2 = 0$
 $(x - 2)(x - 1) = 0$

$x = 2$
 $x = 1$

Points: $(1, 1)$, $(2, 4)$

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③ $y^2 = 5 - x^2$
 $x + 5y = 11$

$x = 11 - 5y$

$y^2 = 5 - (11 - 5y)^2$
 $y^2 = 5 - 121 + 110y - 25y^2$
 $y^2 - 5y + 110y - 116 = 0$
 $y^2 - 5y + 110y - 116 = 0$
 $(y - 2)(y - 3) = 0$

$y = 2$
 $y = 3$

Points: $(1, 2)$, $(-4, 3)$

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⑤ $x - 2y = 1$
 $3y^2 + x - 2y = 1$

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

$x = 1$ $(1, 0)$
 $x = 2(\frac{2}{3}) + 1 = \frac{7}{3}$ $(\frac{7}{3}, \frac{2}{3})$

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⑫ $3y^2 + 3x^2 = 6$
 $4y^2 - 72x^2 - 36 = 0$

$4(3x^2 + 3y^2 = 6)$
 $-3(4y^2 - 72x^2 - 36 = 0)$

$12x^2 + 12y^2 = 24$
 $216x^2 - 12y^2 = -108$

$228x^2 = -84$
 228

No soln $\sqrt{x^2} = \sqrt{\frac{84}{228}}$

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⑭ $x^2 + y^2 = 16$
 $x^2 + y^2 = 16$

$2x^2 = 32$
 $x^2 = 16$
 $x = \pm 4$

$(4, 0)$, $(-4, 0)$

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⑮ $-4x^2 + 25 = 25$
 $-4x^2 + y^2 = 25$

$4x^2 + y^2 = 25$

$2y^2 = 50$
 $y^2 = 25$
 $y = \pm 5$

Points: $(0, -5)$, $(0, 5)$

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$$\begin{array}{l}
 x^2 + 25 = 25 \quad x^2 = 0 \\
 \textcircled{8} \quad x^2 + y^2 = 25 \quad \checkmark \\
 \frac{+400}{16} \quad \frac{+400}{25} = 1400 \quad \checkmark \\
 \hline
 -25(x^2 + y^2 = 25) \\
 25x^2 + 16y^2 = 400 \\
 \underline{-25x^2 - 25y^2 = -625} \\
 -9y^2 = -225 \\
 y^2 = 25 \\
 y = \pm 5 \\
 (0, 5) \\
 (0, -5)
 \end{array}$$

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