

27 
$$\begin{cases} \left(x + \frac{y}{2}\right)^2 - \left(x - \frac{y}{2}\right)^2 = 1 \\ \frac{1}{2}x + y - 1 = 0 \end{cases}$$

$$\left[\left(1, \frac{1}{2}\right)\right]$$

$$\begin{cases} \cancel{x^2} + \frac{\cancel{y^2}}{4} + xy - \cancel{x^2} - \frac{\cancel{y^2}}{4} + xy = 1 \\ y = 1 - \frac{1}{2}x \end{cases} \quad \begin{cases} 2xy = 1 \\ y = 1 - \frac{1}{2}x \end{cases}$$

$$\begin{cases} 2x\left(1 - \frac{1}{2}x\right) = 1 \\ y = 1 - \frac{1}{2}x \end{cases} \quad \begin{cases} 2x - x^2 - 1 = 0 \\ // \end{cases} \quad \begin{cases} x^2 - 2x + 1 = 0 \\ // \end{cases}$$

$$\begin{cases} (x-1)^2 = 0 \\ // \end{cases} \quad \begin{cases} x = 1 \\ y = 1 - \frac{1}{2} = \frac{1}{2} \end{cases} \quad \begin{cases} x = 1 \\ y = \frac{1}{2} \end{cases} \quad \left(1, \frac{1}{2}\right)$$

28

$$\begin{cases} (x+2)(x-y) = (x-1)(x-y) \\ (x+1)^2 - (x-2)^2 = (x+y)(x-y) \end{cases} \left[ \left( \frac{1}{2}, \frac{1}{2} \right) \right]$$

$$\begin{cases} \cancel{x^2} - \cancel{xy} + 2x - 2y = \cancel{x^2} - \cancel{xy} - x + y \\ \cancel{x^2} + 2x + 1 - \cancel{x^2} + 4x - 4 = x^2 - y^2 \end{cases}$$

$$\begin{cases} 3x - 3y = 0 \end{cases}$$

$$\begin{cases} x^2 - y^2 - 6x + 3 = 0 \end{cases}$$

$$\begin{cases} x = y \leftarrow y = x \\ \cancel{x^2} - \cancel{x^2} - 6x + 3 = 0 \end{cases}$$

$$\begin{cases} y = \frac{1}{2} \\ x = \frac{1}{2} \end{cases}$$

$$\begin{cases} x = \frac{1}{2} \\ y = \frac{1}{2} \end{cases} \left( \frac{1}{2}, \frac{1}{2} \right)$$

29

$$\begin{cases} (x+y)^2 + (x-y)^2 = 8 \\ 2x + y + 4 = 0 \end{cases} \quad \left[ (-2, 0); \left( -\frac{6}{5}, -\frac{8}{5} \right) \right]$$

$$\begin{cases} x^2 + y^2 + \cancel{2xy} + x^2 + y^2 - \cancel{2xy} = 8 \\ y = -2x - 4 \end{cases} \quad \begin{cases} \cancel{x^2} + \cancel{y^2} - \frac{4}{\cancel{1}} = 0 \\ y = -2x - 4 \end{cases}$$

$$\begin{cases} x^2 + y^2 - 4 = 0 \\ y = -2x - 4 \end{cases} \quad \begin{cases} x^2 + (-2x - 4)^2 - 4 = 0 \\ // \end{cases}$$

$$\begin{cases} x^2 + 4x^2 + 16 + 16x - 4 = 0 \\ // \end{cases} \quad 5x^2 + 16x + 12 = 0$$

$$\frac{\Delta}{4} = 64 - 60 = 4$$

$$x = \frac{-8 \pm 2}{5} = \begin{cases} -\frac{10}{5} = -2 \\ -\frac{6}{5} \end{cases}$$

$$\begin{cases} x = -2 \\ y = -2(-2) - 4 = 0 \end{cases} \quad \vee \quad \begin{cases} x = -\frac{6}{5} \\ y = -2\left(-\frac{6}{5}\right) - 4 = \frac{12}{5} - 4 = -\frac{8}{5} \end{cases}$$

$$\begin{cases} x = -2 \\ y = 0 \end{cases} \quad \vee \quad \begin{cases} x = -\frac{6}{5} \\ y = -\frac{8}{5} \end{cases}$$

$$(-2, 0) \quad \left( -\frac{6}{5}, -\frac{8}{5} \right)$$

115

$$\begin{cases} 2x^2 - y^2 = 1 \\ x^2 + y^2 = 5 \end{cases}$$

$$[(\sqrt{2}, \sqrt{3}); (\sqrt{2}, -\sqrt{3}); (-\sqrt{2}, \sqrt{3}); (-\sqrt{2}, -\sqrt{3})]$$

$$\begin{cases} 2x^2 - y^2 = 1 \\ x^2 + y^2 = 5 \end{cases}$$


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$$3x^2 = 6$$

$$\begin{cases} 3x^2 = 6 \\ x^2 + y^2 = 5 \end{cases}$$

$$\begin{cases} x^2 = 2 \\ x^2 + y^2 = 5 \end{cases}$$

$$\begin{cases} x^2 = 2 \\ 2 + y^2 = 5 \end{cases}$$

$$\begin{cases} x^2 = 2 \\ y^2 = 3 \end{cases}$$

→

$$\begin{cases} x = \pm\sqrt{2} \\ y^2 = 3 \end{cases}$$

→

$$\begin{cases} x = -\sqrt{2} \\ y^2 = 3 \end{cases}$$

v

$$\begin{cases} x = \sqrt{2} \\ y^2 = 3 \end{cases}$$

$$\begin{cases} x = -\sqrt{2} \\ y = \pm\sqrt{3} \end{cases}$$

v

$$\begin{cases} x = \sqrt{2} \\ y = \pm\sqrt{3} \end{cases}$$

$$\begin{cases} x = -\sqrt{2} \\ y = -\sqrt{3} \end{cases} \quad \vee \quad \begin{cases} x = -\sqrt{2} \\ y = \sqrt{3} \end{cases}$$

$$(-\sqrt{2}, -\sqrt{3})$$

$$(-\sqrt{2}, \sqrt{3})$$

$$\begin{cases} x = \sqrt{2} \\ y = -\sqrt{3} \end{cases} \quad \vee \quad \begin{cases} x = \sqrt{2} \\ y = \sqrt{3} \end{cases}$$

$$(\sqrt{2}, -\sqrt{3}) \quad (\sqrt{2}, \sqrt{3})$$

127

$$\begin{cases} x^2 + y^2 - 2x - y = 1 \\ 2x^2 + 2y^2 - 4x + 2y = 1 \end{cases}$$

$$\left[ \left( \frac{4 \pm 3\sqrt{3}}{4}, -\frac{1}{4} \right) \right]$$

↙ multiply per -2

$$\begin{cases} -2x^2 - 2y^2 + 4x + 2y = -2 \\ 2x^2 + 2y^2 - 4x + 2y = 1 \end{cases}$$


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$$\begin{matrix} // & // & // & 4y = -1 \end{matrix}$$

$$\begin{cases} x^2 + y^2 - 2x - y = 1 \\ y = -\frac{1}{4} \end{cases}$$

$$\begin{cases} x^2 + \frac{1}{16} - 2x + \frac{1}{4} - 1 = 0 \rightarrow 16x^2 + 1 - 32x + 4 - 16 = 0 \\ y = -\frac{1}{4} \end{cases}$$

$$16x^2 - 32x - 11 = 0$$

$$\frac{\Delta}{4} = 256 + 176 = 432$$

$$\begin{array}{r|l} 432 & 2^2 \\ 108 & 2^2 \\ 27 & 3^3 \\ 1 & \end{array}$$

$$\begin{aligned} \sqrt{432} &= \sqrt{2^4 \cdot 3^3} = 2^2 \cdot 3\sqrt{3} = \\ &= 12\sqrt{3} \end{aligned}$$

$$\begin{aligned} x &= \frac{16 \pm \sqrt{432}}{16} = \frac{16 \pm 12\sqrt{3}}{16} = \\ &= \frac{\cancel{4}(4 \pm 3\sqrt{3})}{\cancel{16}_4} = \frac{4 \pm 3\sqrt{3}}{4} \end{aligned}$$

$$\begin{cases} x = \frac{4 - 3\sqrt{3}}{4} \\ y = -\frac{1}{4} \end{cases} \vee \begin{cases} x = \frac{4 + 3\sqrt{3}}{4} \\ y = -\frac{1}{4} \end{cases}$$

$$\left( \frac{4 - 3\sqrt{3}}{4}, -\frac{1}{4} \right) \quad \left( \frac{4 + 3\sqrt{3}}{4}, -\frac{1}{4} \right)$$