

$$x = \frac{2\sqrt{y^4 + 20y^2 + 24} - 2y^2}{8}$$

$$x = -\frac{2\sqrt{y^4 + 20y^2 + 24} - 2y^2}{8}$$

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$$y = t^3 - \frac{t^2}{2} - 2t + 4$$

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Solve for y, Complex solution  
Steps for solving the linear equation

$$y = t^3 - \frac{t^2}{2} - 2t + 4$$

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Solve for y, T Complex solution

$$y = t^3 - \frac{t^2}{2} - 2t + 4$$

t ∈ C

Solve for T

$$t = \frac{(6\sqrt{6}(2y-5)(27y-130) + 108y-395)^{1/3} (C-11\sqrt{3})}{C6\sqrt{6}(2y-5)(27y-130) + 108y-395} + \frac{2\sqrt{6}\sqrt{C}}{2y-5(27-130) + 108y-395 - 25\sqrt{3} - 25}$$

$$t = \frac{(6\sqrt{6}(2y-5)(27y-130) + 108y-395)^{1/3} (C-11\sqrt{3})}{C6\sqrt{6}(2y-5)(27y-130) + 108y-395} + \frac{2\sqrt{6}\sqrt{C}}{2y-5(27-130) + 108y-395 - 25\sqrt{3} - 25}$$

Number 2

$$2y^2 - 5x^4 - 2 - 2y^3 = 0$$

$$x = 5^{(3/4)\varphi} \sqrt[4]{-7y^3 + 2y^2 - 2}$$

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$$x = \frac{5^{(3/4)\varphi} \sqrt[4]{-7y^3 + 2y^2 - 2}}{5}$$

$$x = -\frac{5^{(3/4)\varphi} \sqrt[4]{-7y^3 + 2y^2 - 2}}{5}$$

Solve for y (Complex solution)

$$y = \sqrt[3]{\frac{(21\sqrt{3(33075x^8 + 26300x^4 + 5228)} - 6615x^4 - 2630)(\sqrt[3]{2}(-1 + \sqrt{3}i)) + 2(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630}{8\varphi}}$$

$$y = \frac{2^{(2/3)}(21\sqrt{3(33075x^8 + 26300x^4 + 5228)} - 6615x^4 - 2630)^{1/3} (C-11\sqrt{3}) + 2\sqrt{6}\sqrt{C}}{6615x^4 - 2630} * \varphi x^{(2/3)}$$

φ 2



$$t = \frac{(6\sqrt{6} - 5)(2y - 130 + 170y - 395) - (-1 + \sqrt{31})(6\sqrt{6} - 5)(2y - 130) + 108 - 395}{12} + 2\sqrt{6}(2y - 5)(2y - 130) + 108 - 395$$

$$y = t^2 - \frac{t^2}{2} - 2t + 4$$

$t \in \mathbb{R}$

$$\text{Assign } y = t^2 - \frac{t^2}{2} - 2t + 4$$

(b)

$$\textcircled{2} \quad \begin{aligned} 4x^2 + 2xy^3 - 5y^2 &= 6 \\ 4x^2 + 2y^3x - 5y^2 &= 6 \end{aligned}$$

$$4x^2 + 2y^3x - 5y^2 - 6 = 6 - 6$$

$$4x^2 + 2y^3x - 5y^2 - 6 = 0$$

$$x = \frac{-2y^3 \pm \sqrt{(2y^3)^2 - 4 \times 4(-5y^2 - 6)}}{2 \times 4}$$

$$x = \frac{-2y^3 \pm \sqrt{4y^6 - 4 \times 4(-5y^2 - 6)}}{2 \times 4}$$

$$x = \frac{-2y^3 \pm \sqrt{4y^6 + 46(-5y^2 - 6)}}{2 \times 4}$$

$$x = \frac{-2y^3 \pm \sqrt{4y^6 + 80y^2 + 96}}{2 \times 4}$$

$$x = \frac{-2y^3 \pm 2\sqrt{y^6 + 20y^2 + 24}}{2 \times 4 \times 2}$$

$$x = \frac{-2y^3 \pm 2\sqrt{y^6 + 20y^2 + 24}}{8}$$

Number 2

$$2y^2 - 5x^4 - 2 - 7y^3 = 0$$

$$x = \sqrt[5]{\frac{2y^3 + 2y^2 - 2}{7}}$$

$$x = \sqrt[5]{\frac{-7y^3 + 2y^2 - 2}{5}}$$

$$x = \sqrt[5]{\frac{-7y^3 + 2y^2 - 2}{5}}$$

$$x = -\sqrt[5]{\frac{7y^3 + 2y^2 - 2}{5}}$$

Solve for  $y$  (Complex solution)

$$y = \sqrt[3]{\frac{21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630}{(-1 + \sqrt{3}i)(21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630)^{2/3} + \varphi \times 2 \left(\frac{2}{3}\right)^{2/3} \sqrt{21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630} - 8\sqrt{3} - 8}}{8\varphi}}$$

$$y = \sqrt[3]{\frac{21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630}{(-1 - \sqrt{3}i)(21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630)^{2/3} + \varphi \times 2 \left(\frac{2}{3}\right)^{2/3} \sqrt{21\sqrt{3}(33075x^8 + 26300x^4 + 5228) - 6615x^4 - 2630} - 8\sqrt{3} - 8}}{8\varphi}}$$

$\varphi^2$