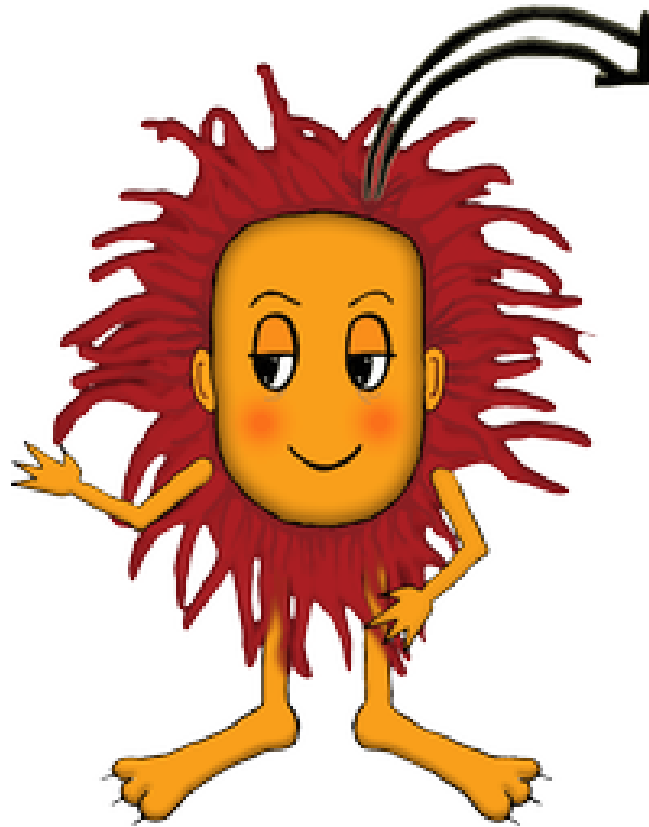


Velika logična pošast



Krožnica skozi ničle kvadratne funkcije

Dana je kvadratna funkcija $y=x^2+px+q$.

Poišči in nariši krožnico, ki gre skozi ničli funkcije in točko $(0,1)$.

To je Carlylejeva krožnica za funkcijo.

Namig: premer te krožnice je daljica skozi krajišči $(0,1)$ in $(-p,q)$.

$$1. \\ y = x^2 + \frac{5x}{2} - 6$$

$$2. \\ y = x^2 + x - 12$$

$$3. \\ y = x^2 - \frac{x}{2} - 14$$

$$4. \\ y = x^2 + \frac{5x}{2} - \frac{25}{2}$$

$$5. \\ y = x^2 + 2x - \frac{21}{4}$$

$$6. \\ y = x^2 - 9$$

$$7. \\ y = x^2 - \frac{5x}{2} - \frac{25}{2}$$

$$8. \\ y = x^2 - \frac{x}{2} - \frac{15}{2}$$

$$9. \\ y = x^2 + 2x - \frac{21}{4}$$

$$10. \\ y = x^2 - \frac{25}{4}$$

$$11. \\ y = x^2 + \frac{x}{2} - 5$$

$$12. \\ y = x^2 + \frac{5x}{2} - 6$$

$$13. \\ y = x^2 - 16$$

$$14. \\ y = x^2 - 2x - \frac{45}{4}$$

$$15. \\ y = x^2 - \frac{3x}{2} - 10$$

$$16. \\ y = x^2 + x - \frac{35}{4}$$

$$17. \\ y = x^2 - \frac{3x}{2} - 7$$

$$18. \\ y = x^2 - \frac{3x}{2} - 7$$

$$19. \\ y = x^2 + \frac{x}{2} - \frac{21}{2}$$

$$20. \\ y = x^2 + x - \frac{35}{4}$$

$$21. \\ y = x^2 + \frac{x}{2} - \frac{45}{2}$$

$$22. \\ y = x^2 + \frac{5x}{2} - 6$$

$$23. \\ y = x^2 + \frac{x}{2} - \frac{45}{2}$$

$$24. \\ y = x^2 - x - \frac{35}{4}$$

$$25. \\ y = x^2 - \frac{49}{4}$$

$$26. \\ y = x^2 + \frac{5x}{2} - 9$$

$$27. \\ y = x^2 + x - 20$$

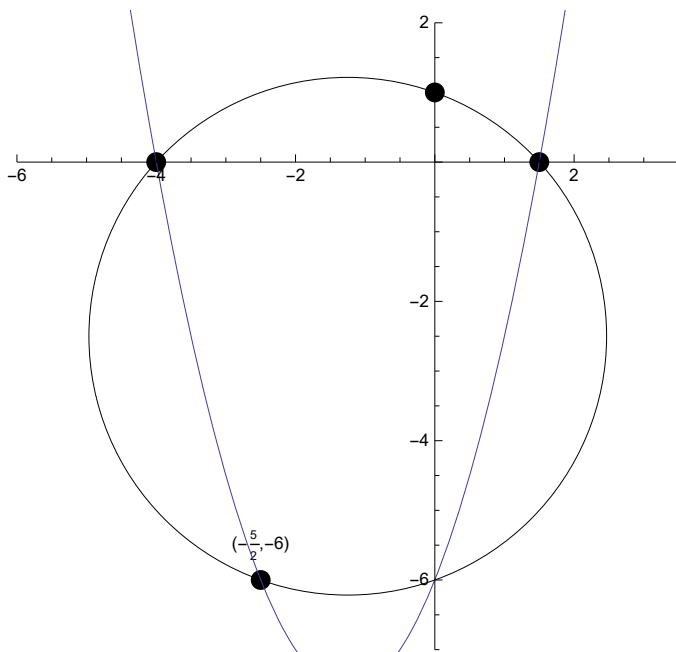
$$28. \\ y = x^2 + \frac{3x}{2} - 7$$

$$29. \\ y = x^2 - \frac{25}{4}$$

$$30. \\ y = x^2 + 2x - 15$$

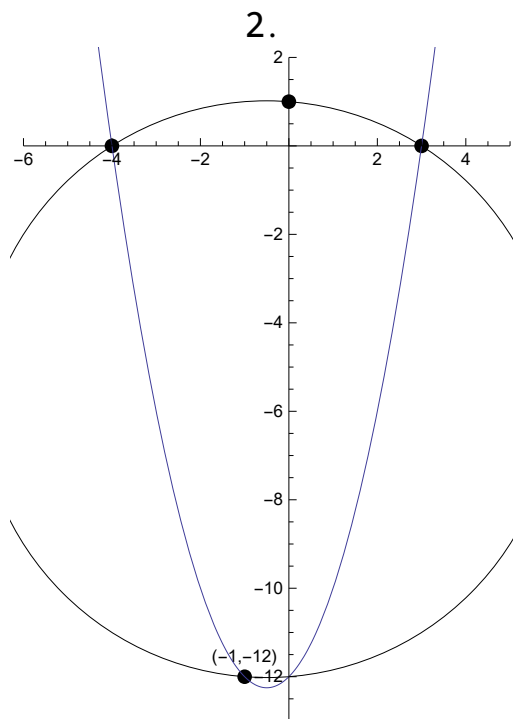
Rešitve:

1.



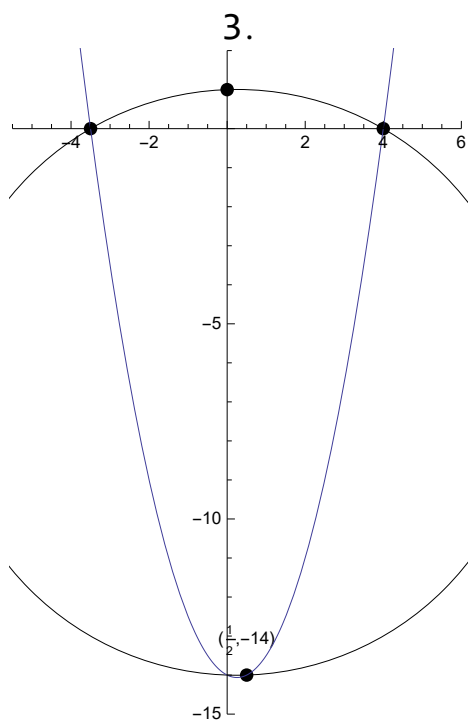
$$\left(x + \frac{5}{4}\right)^2 + \left(y + \frac{5}{2}\right)^2 = \frac{221}{16}$$

$$y = x^2 + \frac{5x}{2} - 6$$



$$\left(x + \frac{1}{2}\right)^2 + \left(y + \frac{11}{2}\right)^2 = \frac{85}{2}$$

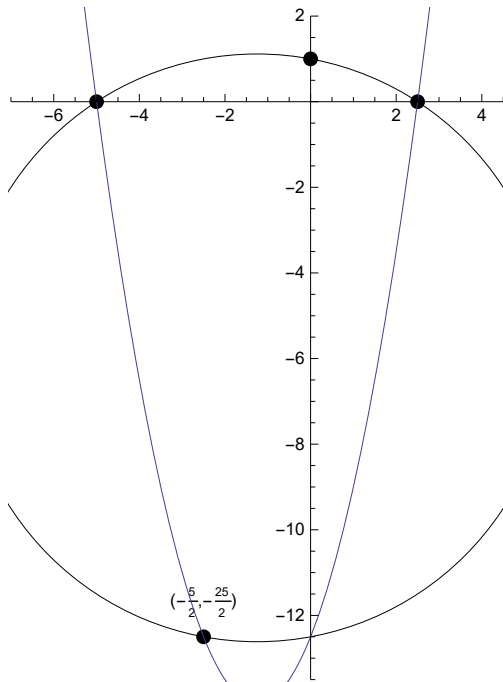
$$y = x^2 + x - 12$$



$$\left(x - \frac{1}{4}\right)^2 + \left(y + \frac{13}{2}\right)^2 = \frac{901}{16}$$

$$y = x^2 - \frac{x}{2} - 14$$

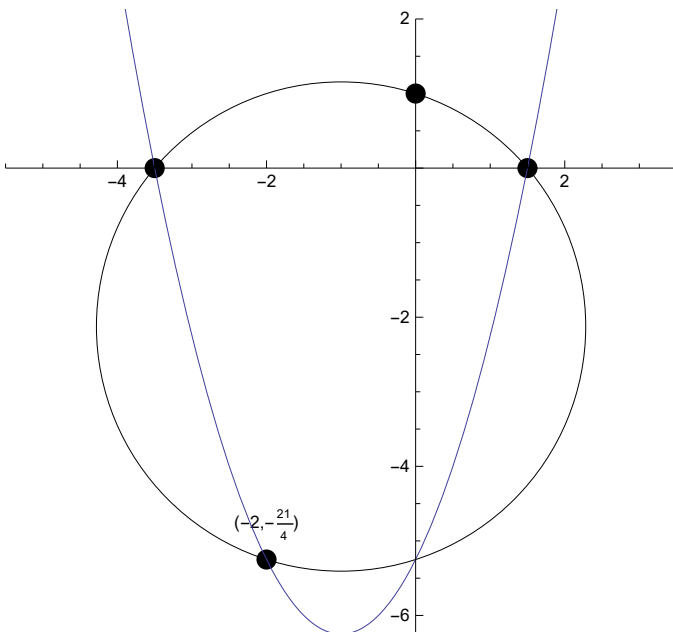
4.



$$\left(x + \frac{5}{4}\right)^2 + \left(y + \frac{23}{4}\right)^2 = \frac{377}{8}$$

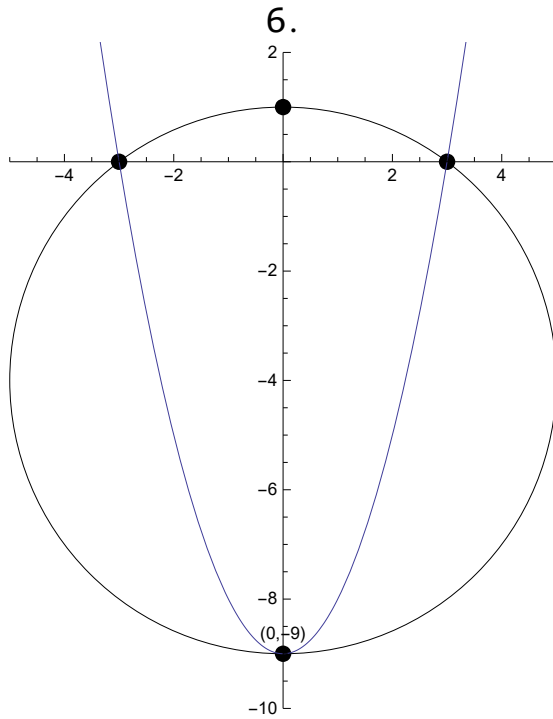
$$y = x^2 + \frac{5x}{2} - \frac{25}{2}$$

5.



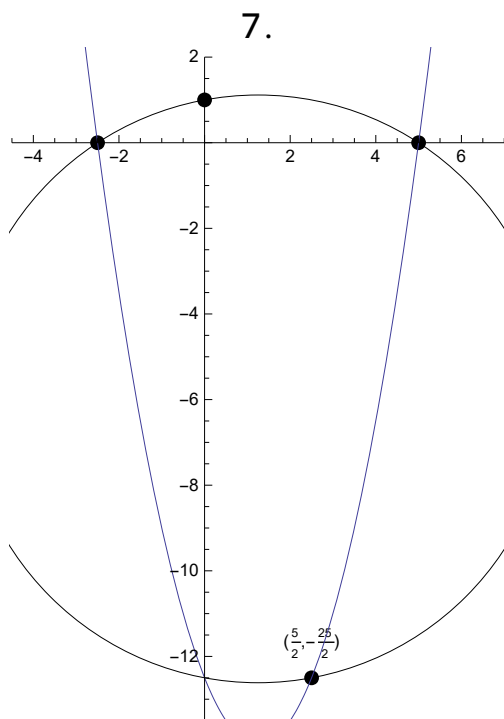
$$\left(x + 1\right)^2 + \left(y + \frac{17}{8}\right)^2 = \frac{689}{64}$$

$$y = x^2 + 2x - \frac{21}{4}$$



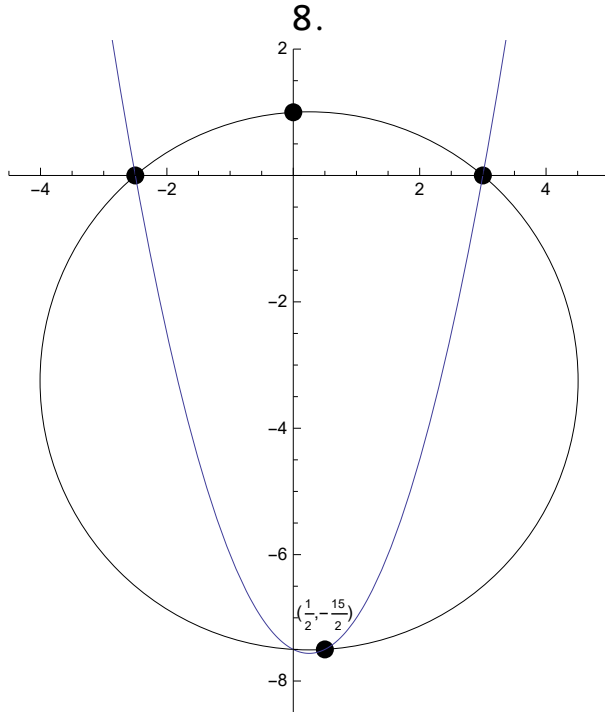
$$x^2 + (y + 4)^2 = 25$$

$$y = x^2 - 9$$



$$\left(x - \frac{5}{4}\right)^2 + \left(y + \frac{23}{4}\right)^2 = \frac{377}{8}$$

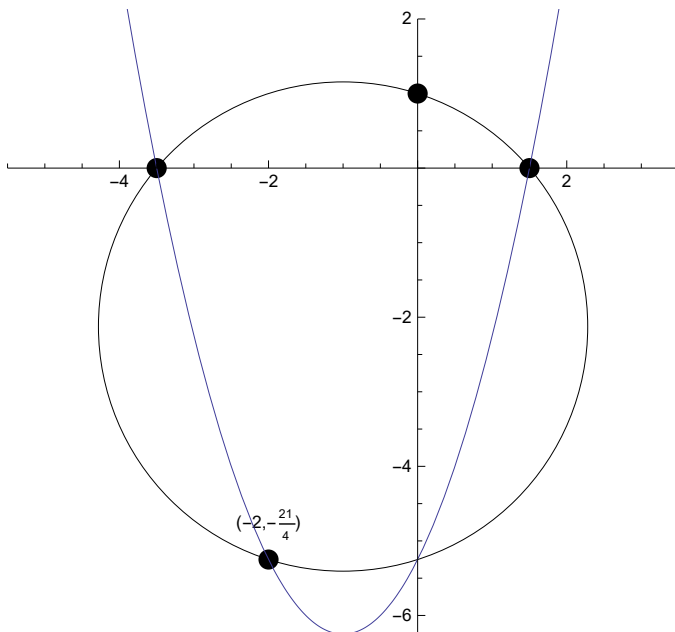
$$y = x^2 - \frac{5x}{2} - \frac{25}{2}$$



$$\left(x - \frac{1}{4}\right)^2 + \left(y + \frac{13}{4}\right)^2 = \frac{145}{8}$$

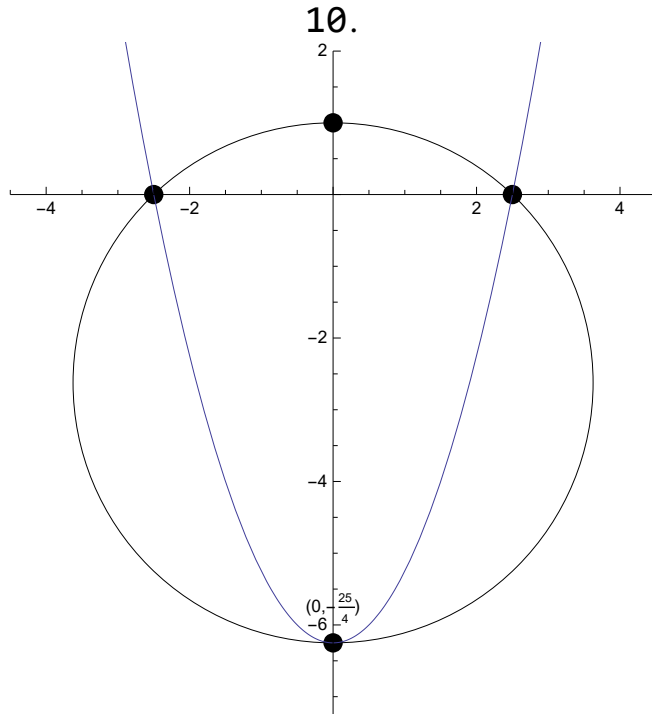
$$y = x^2 - \frac{x}{2} - \frac{15}{2}$$

9.



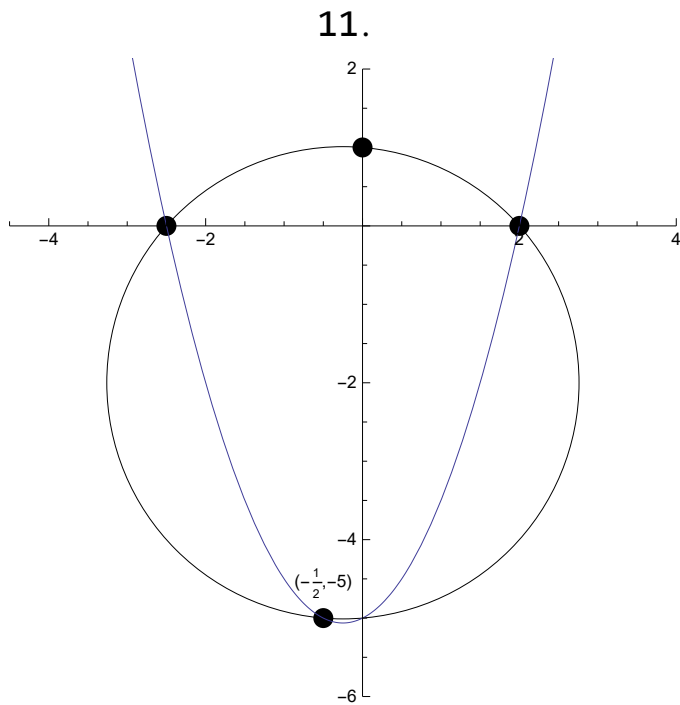
$$\left(x + 1\right)^2 + \left(y + \frac{17}{8}\right)^2 = \frac{689}{64}$$

$$y = x^2 + 2x - \frac{21}{4}$$



$$x^2 + \left(y + \frac{21}{8}\right)^2 = \frac{841}{64}$$

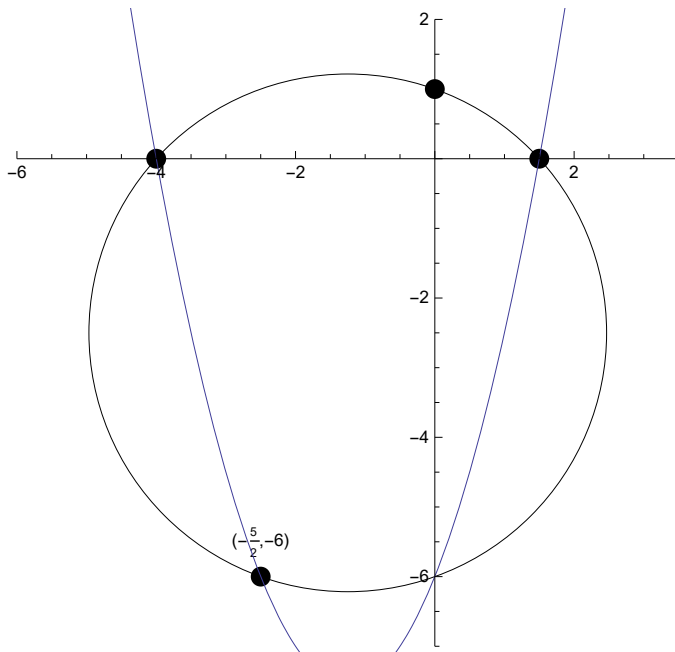
$$y = x^2 - \frac{25}{4}$$



$$\left(x + \frac{1}{4}\right)^2 + (y + 2)^2 = \frac{145}{16}$$

$$y = x^2 + \frac{x}{2} - 5$$

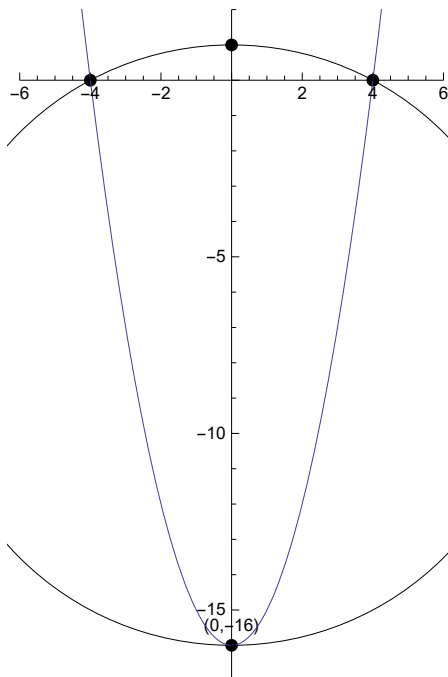
12.



$$\left(x + \frac{5}{4}\right)^2 + \left(y + \frac{5}{2}\right)^2 = \frac{221}{16}$$

$$y = x^2 + \frac{5x}{2} - 6$$

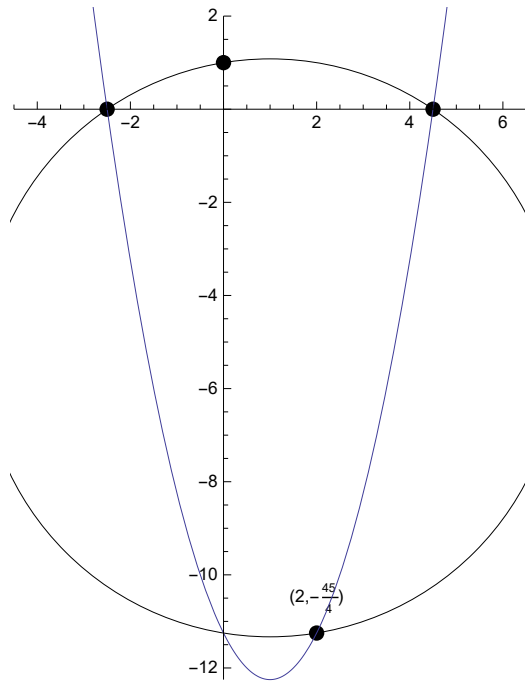
13.



$$x^2 + \left(y + \frac{15}{2}\right)^2 = \frac{289}{4}$$

$$y = x^2 - 16$$

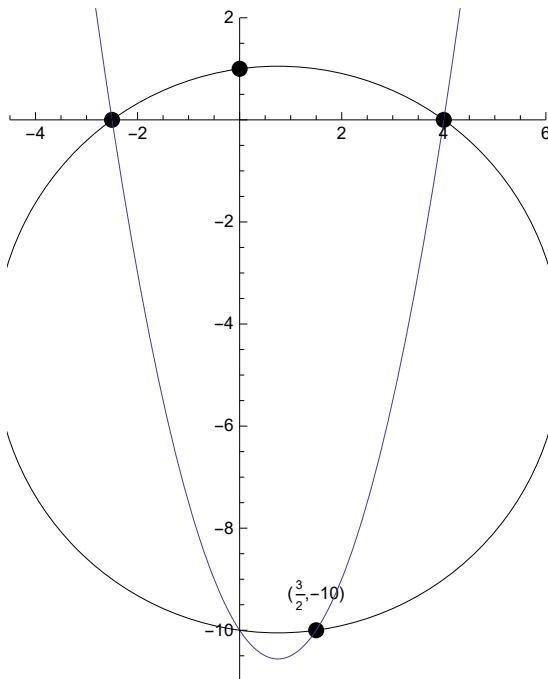
14.



$$\left(x - 1\right)^2 + \left(y + \frac{41}{8}\right)^2 = \frac{2465}{64}$$

$$y = x^2 - 2x - \frac{45}{4}$$

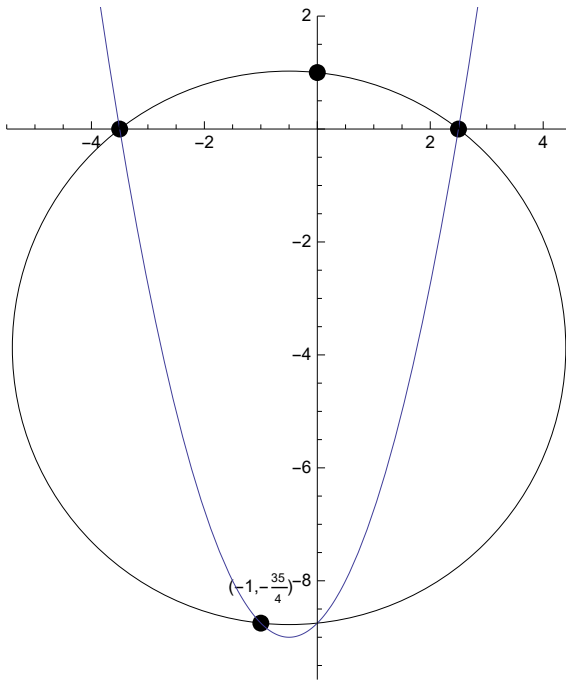
15.



$$\left(x - \frac{3}{2}\right)^2 + \left(y + \frac{9}{2}\right)^2 = \frac{493}{16}$$

$$y = x^2 - \frac{3x}{2} - 10$$

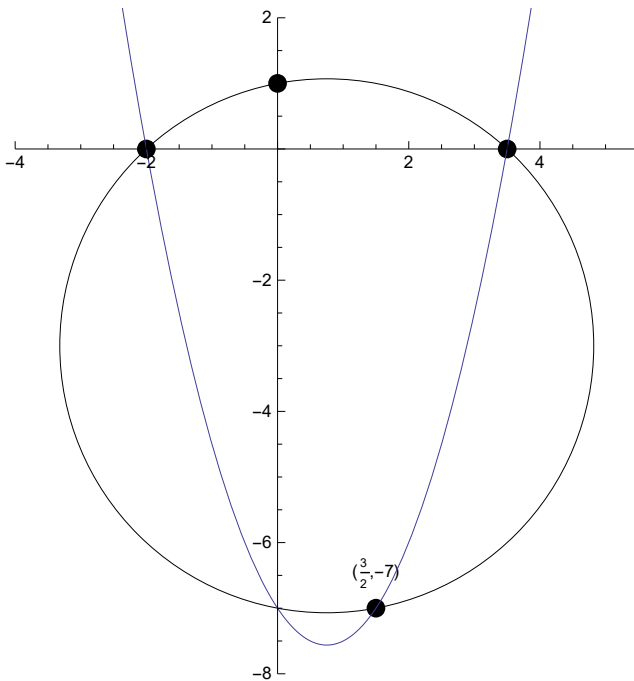
16.



$$\left(x + \frac{1}{2}\right)^2 + \left(y + \frac{31}{8}\right)^2 = \frac{1537}{64}$$

$$y = x^2 + x - \frac{35}{4}$$

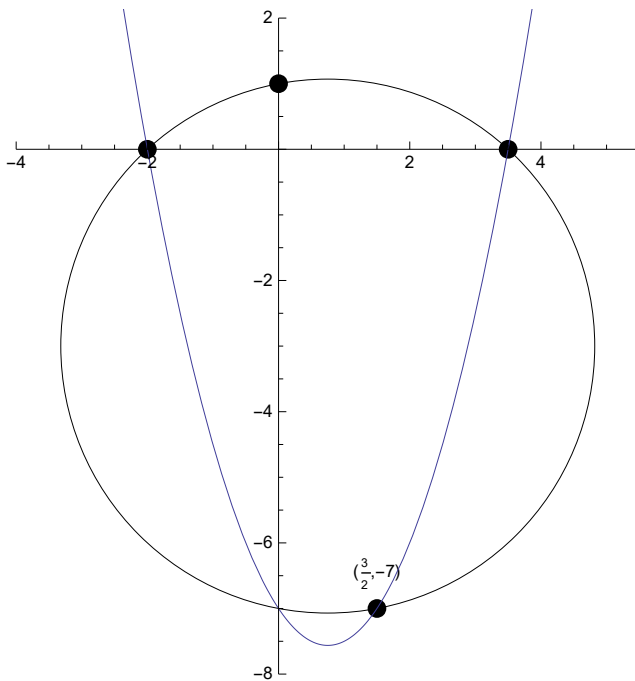
17.



$$\left(x - \frac{3}{4}\right)^2 + (y + 3)^2 = \frac{265}{16}$$

$$y = x^2 - \frac{3x}{2} - 7$$

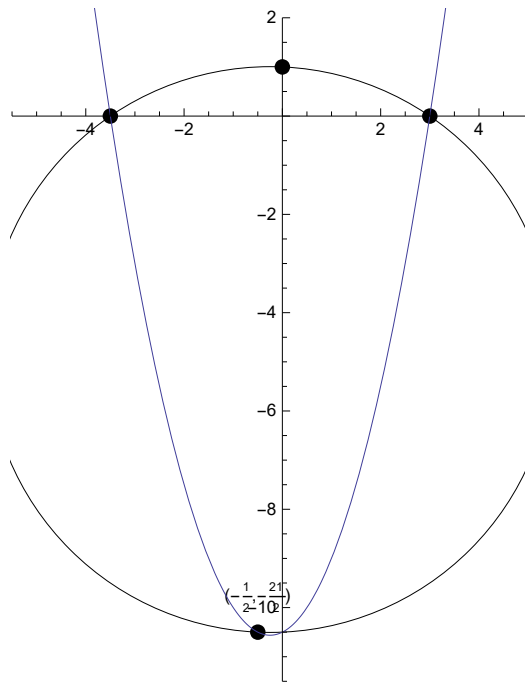
18.



$$\left(x - \frac{3}{4}\right)^2 + (y + 7)^2 = \frac{265}{16}$$

$$y = x^2 - \frac{3x}{2} - 7$$

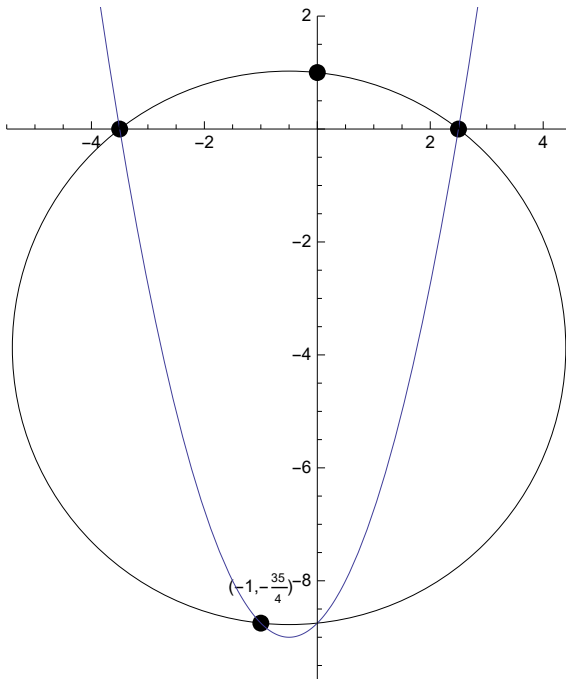
19.



$$\left(x + \frac{1}{4}\right)^2 + \left(y + \frac{19}{4}\right)^2 = \frac{265}{8}$$

$$y = x^2 + \frac{x}{2} - \frac{21}{2}$$

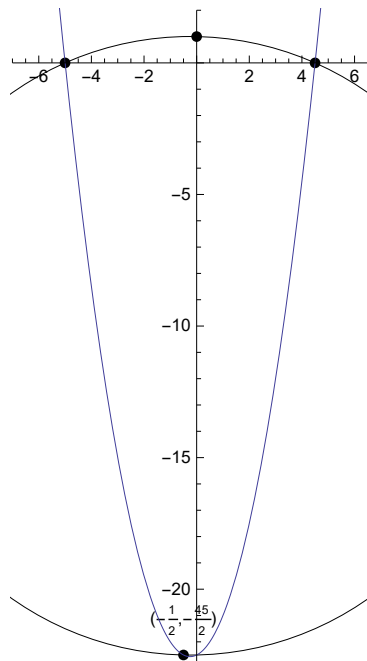
20.



$$\left(x + \frac{1}{2}\right)^2 + \left(y + \frac{31}{8}\right)^2 = \frac{1537}{64}$$

$$y = x^2 + x - \frac{35}{4}$$

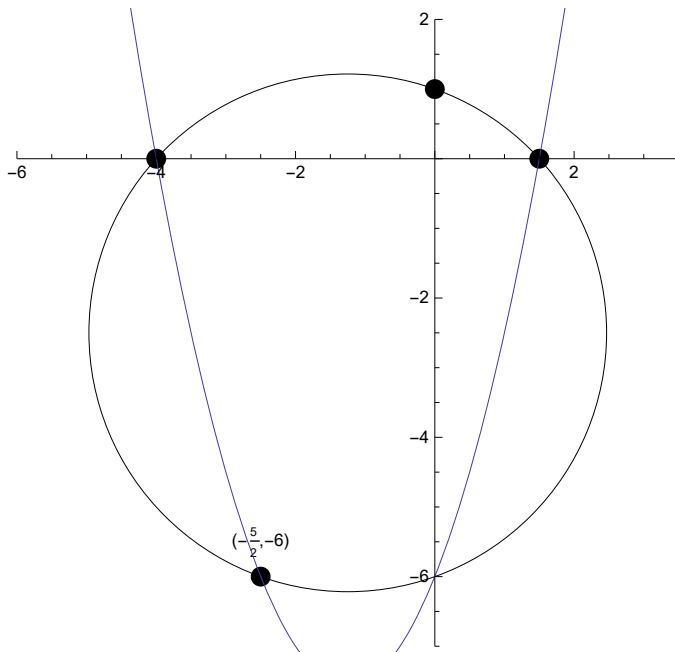
21.



$$\left(x + \frac{1}{4}\right)^2 + \left(y + \frac{43}{8}\right)^2 = \frac{1105}{8}$$

$$y = x^2 + \frac{x}{2} - \frac{45}{2}$$

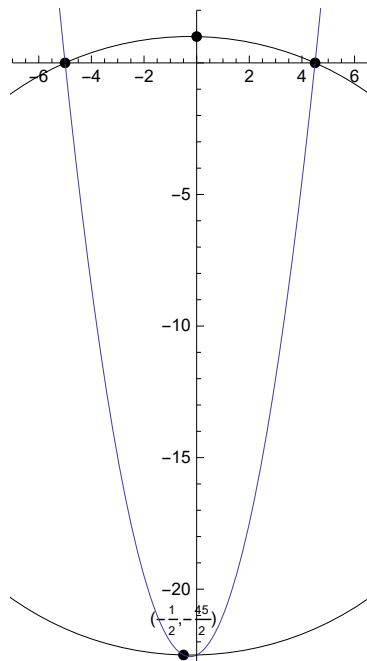
22.



$$\left(x + \frac{5}{4}\right)^2 + \left(y + \frac{5}{2}\right)^2 = \frac{221}{16}$$

$$y = x^2 + \frac{5x}{2} - 6$$

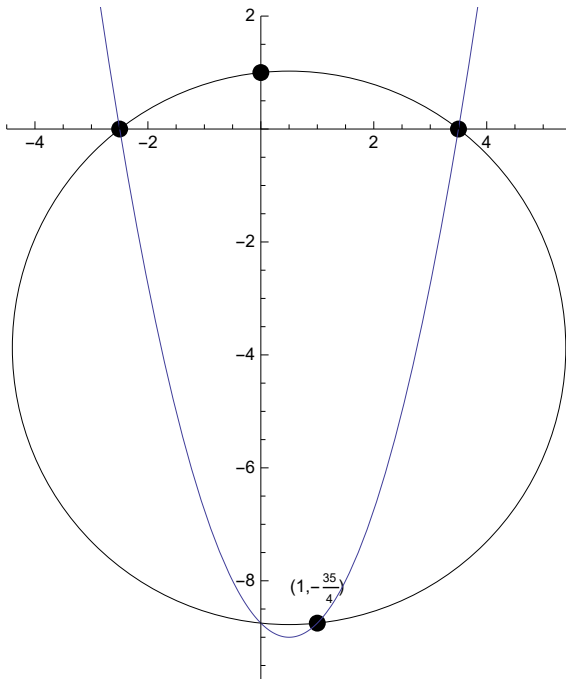
23.



$$\left(x + \frac{1}{4}\right)^2 + \left(y + \frac{43}{4}\right)^2 = \frac{1105}{8}$$

$$y = x^2 + \frac{x}{2} - \frac{45}{2}$$

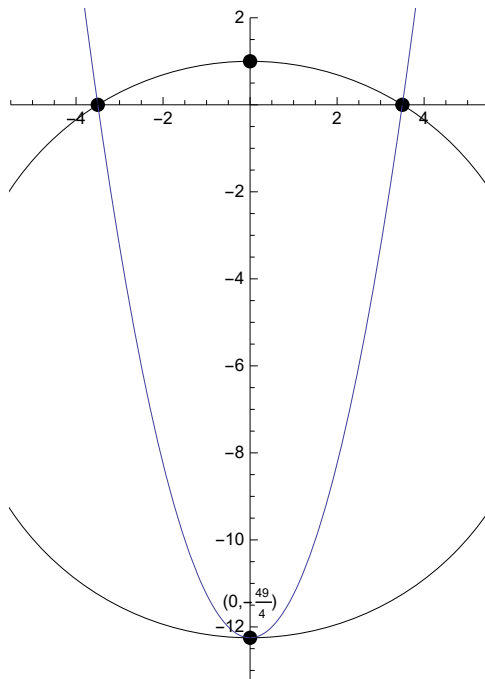
24.



$$\left(x - \frac{1}{2}\right)^2 + \left(y + \frac{31}{8}\right)^2 = \frac{1537}{64}$$

$$y = x^2 - x - \frac{35}{4}$$

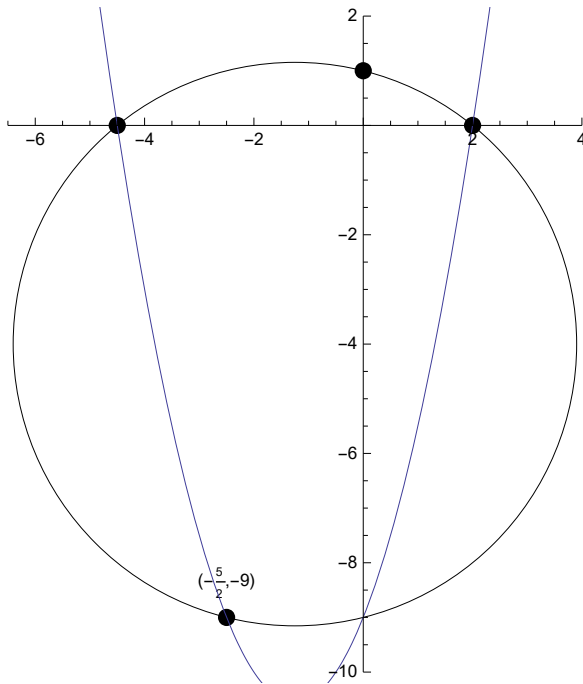
25.



$$x^2 + \left(y + \frac{49}{8}\right)^2 = \frac{2809}{64}$$

$$y = x^2 - \frac{49}{4}$$

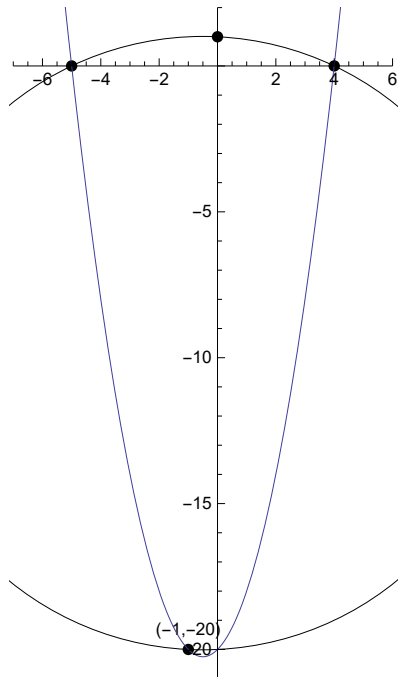
26.



$$\left(x + \frac{5}{4}\right)^2 + (y + 4)^2 = \frac{425}{16}$$

$$y = x^2 + \frac{5x}{2} - 9$$

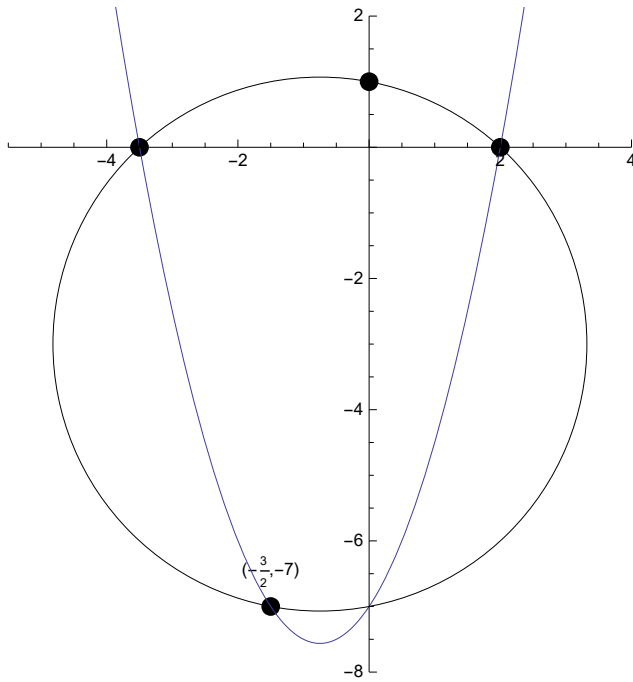
27.



$$\left(x + \frac{1}{2}\right)^2 + \left(y + \frac{19}{2}\right)^2 = \frac{221}{2}$$

$$y = x^2 + x - 20$$

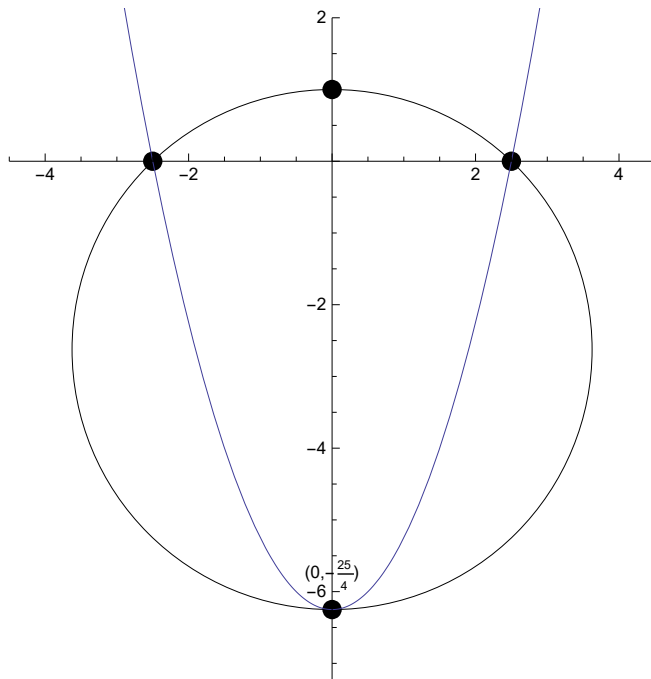
28.



$$\left(x + \frac{3}{2}\right)^2 + (y + 7)^2 = \frac{265}{16}$$

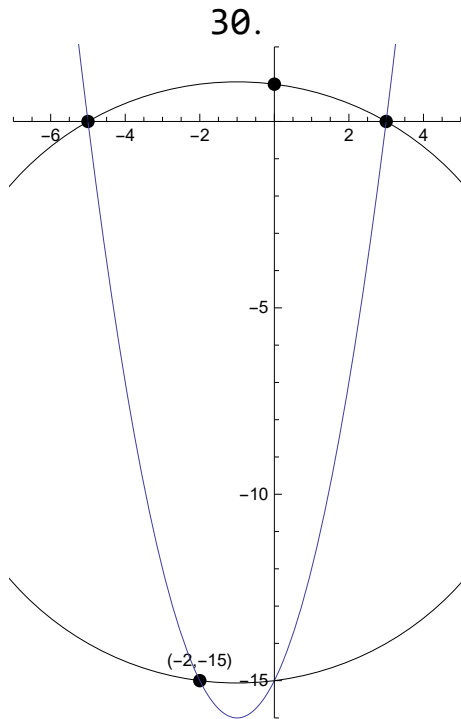
$$y = x^2 + \frac{3x}{2} - 7$$

29.



$$x^2 + \left(y + \frac{25}{4}\right)^2 = \frac{81}{16}$$

$$y = x^2 - \frac{25}{4}$$



$$(x + 1)^2 + (y + 7)^2 = 65$$

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

Izidor Hafner Geometric Solution of a Quadratic Equation Using Carlyle ' s Circle

[http : //](http://demonstrations.wolfram.com/GeometricSolutionOfAQuadraticEquationUsingCarlylesCircle/)

demonstrations.wolfram.com/GeometricSolutionOfAQuadraticEquationUsingCarlylesCircle/

Wolfram Demonstrations Project

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