As the student of the equation of a parabola, learn to find the standard form of the equation of an ellipse.

1. Given: $x^2 + 4x + y^2 + 6y - 9 = 0 \quad \rightarrow \quad (x+2)^2 + (y+3)^2 = 0$

2. Given: $4x^2 + 8x + 4y^2 + 9y + 5 = 0 \quad \rightarrow \quad (2x+1)^2 + (2y+3)^2 = 0$

3. Given: $x^2 - 6x + y^2 + 2y - 15 = 0 \quad \rightarrow \quad (x-3)^2 + (y+1)^2 = 0$

4. Given: $x^2 - 8x + y^2 + 4y - 12 = 0 \quad \rightarrow \quad (x-4)^2 + (y+2)^2 = 0$

5. Given: $x^2 - 10x + y^2 + 6y - 25 = 0 \quad \rightarrow \quad (x-5)^2 + (y+3)^2 = 0$

6. Given: $x^2 - 12x + y^2 + 6y - 36 = 0 \quad \rightarrow \quad (x-6)^2 + (y+3)^2 = 0$

7. Given: $x^2 - 14x + y^2 + 8y - 49 = 0 \quad \rightarrow \quad (x-7)^2 + (y+4)^2 = 0$

8. Given: $x^2 - 16x + y^2 + 12y - 64 = 0 \quad \rightarrow \quad (x-8)^2 + (y+6)^2 = 0$

9. Given: $x^2 - 18x + y^2 + 18y - 81 = 0 \quad \rightarrow \quad (x-9)^2 + (y+9)^2 = 0$

10. Given: $x^2 - 20x + y^2 + 20y - 100 = 0 \quad \rightarrow \quad (x-10)^2 + (y+10)^2 = 0$

11. Given: $x^2 - 22x + y^2 + 22y - 121 = 0 \quad \rightarrow \quad (x-11)^2 + (y+11)^2 = 0$

12. Given: $x^2 - 24x + y^2 + 24y - 144 = 0 \quad \rightarrow \quad (x-12)^2 + (y+12)^2 = 0$

13. Given: $x^2 - 26x + y^2 + 26y - 169 = 0 \quad \rightarrow \quad (x-13)^2 + (y+13)^2 = 0$

14. Given: $x^2 - 28x + y^2 + 28y - 196 = 0 \quad \rightarrow \quad (x-14)^2 + (y+14)^2 = 0$

15. Given: $x^2 - 30x + y^2 + 30y - 225 = 0 \quad \rightarrow \quad (x-15)^2 + (y+15)^2 = 0$

16. Given: $x^2 - 32x + y^2 + 32y - 256 = 0 \quad \rightarrow \quad (x-16)^2 + (y+16)^2 = 0$

17. Given: $x^2 - 34x + y^2 + 34y - 289 = 0 \quad \rightarrow \quad (x-17)^2 + (y+17)^2 = 0$

18. Given: $x^2 - 36x + y^2 + 36y - 324 = 0 \quad \rightarrow \quad (x-18)^2 + (y+18)^2 = 0$

19. Given: $x^2 - 38x + y^2 + 38y - 361 = 0 \quad \rightarrow \quad (x-19)^2 + (y+19)^2 = 0$

20. Given: $x^2 - 40x + y^2 + 40y - 400 = 0 \quad \rightarrow \quad (x-20)^2 + (y+20)^2 = 0$

All work must be shown on a separate sheet of paper. Please ensure on this sheet in the appropriate location.
\[(1-x)(x-1) = \frac{3}{16} \Rightarrow x + 4 = \frac{9}{16} \Rightarrow 16(x - 1) = 9(x + 4) = \frac{9}{16} \Rightarrow (x - 1) = \frac{9}{16} \Rightarrow x = \frac{9}{16} - 1 \Rightarrow x = \frac{1}{16} \]

Asymptotes

\[f(1 - 4x + 16) \Rightarrow c = 15 \]
\[b = 6 + 9 \]
\[a = 1 + 4 \]
\[b = 9 \]
\[a = 6 \]
\[c = 1 \]

Vertical Hyperbola

\[\frac{b}{(y + 4)^2} - \frac{a}{(x - 1)^2} = 1 \]

\[\frac{6}{(y + 4)^2} + \frac{9}{(x - 1)^2} = 1 \]

\[6(y + 4) + 9(x - 1) = 36 \]
\[36 = 4(x - 1)^2 + 5(y + 4)^2 \]
\[6 = x + y + 8 \Rightarrow 6 = 0 \]
\[x = -6 \]
\[y = -6 \]

\[x - 4 = 6(y - 10) \]
\[x = 4 \]
\[y = 6 \]
\[ y = y' + 4 \]

\[ x = x' + 1 \]

Circle: \((c, 0) = (0, 0)\)

\[ \sqrt{(x-2)^2 + (y-0)^2} = 12 \]

\[ 3(x^2 - 2x) + 3(y-0)^2 = 0 \]

\[ x = \frac{1}{4}(x' + 4) + y' + 4 = 4(x^2 + 16y + 9) - 4x + 16y + 9 \]

\[ \frac{16}{(x+2)^2} + \frac{4}{(y+3)^2} = 1 \]
$C = 1.2$

$C = 14.4$

$C = 1369 - 72$

$P = 1325 \quad q = 1369$

$b = 85 \quad a = 35$

They are placed at the

$\frac{p}{a} = \frac{900}{40} = 40 (50)$

$900 = 40 (50)$

$x_2 = 18 y$

$(0 - y)^2 = 4(y - h)^2$

$x - 0 = (y - h)^2$

$x - (y - h)^2 = 4$
   a. Circle (20, same sign, same c/c)
   b. Ellipse (same as above)
   c. Ellipse: (20, same sign, diff. c/c)
   d. Parabola (1 squared term)

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\[
\frac{(x-5)^2}{12} - \frac{(y-1)^2}{4} = 1
\]

Vertex: (a, b) = (5, 1)

Apex: \( p = \frac{a}{2} = \frac{5}{2} \)

\[
\frac{(x-0)^2}{16} + \frac{(y-0)^2}{9} = 1
\]

\[
\frac{(x-0)^2}{36} + \frac{(y-3)^2}{16} = 1
\]

Horizontal: \( a = 2 \)