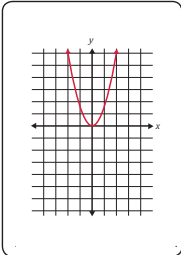
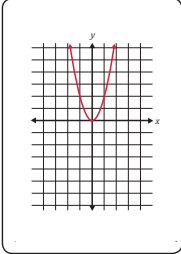
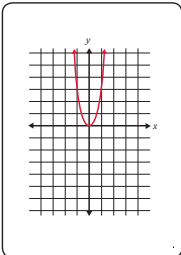
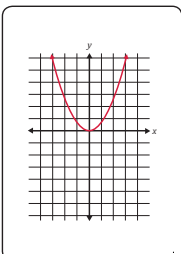
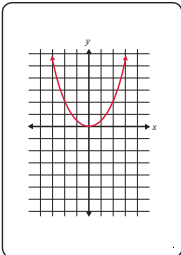
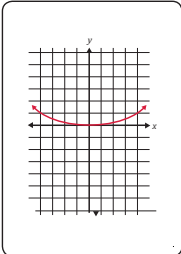
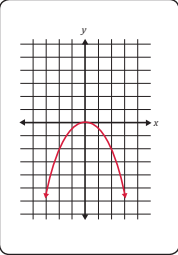
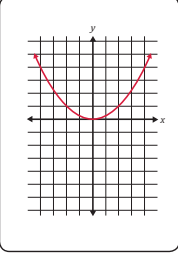
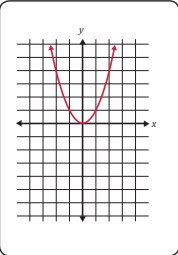
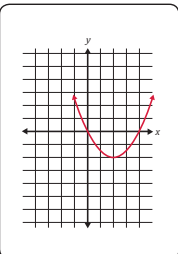
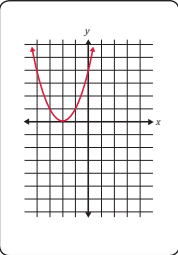
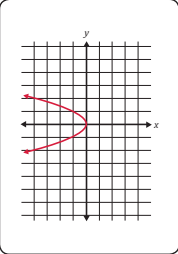


The Algebra Game: Conic Sections Matching Card Sets

Deck A

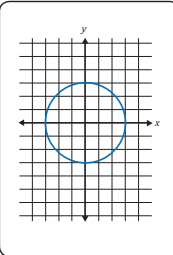
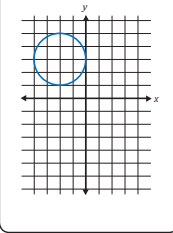
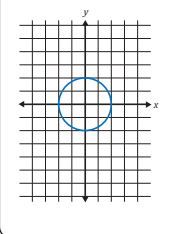
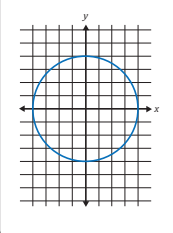
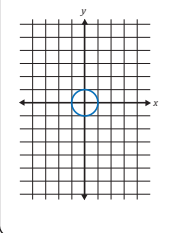
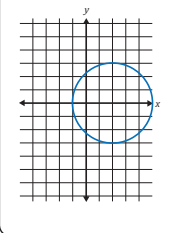
| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|---|--|--|--|--|---|---|---|----|----|----|------|---|---|---|------|---|----|
|  | $y = \frac{3}{2}x^2$ equation $z^x \frac{z}{2} = \ell$ | $(0, \frac{1}{6})$ foci $(\frac{2}{1}, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $3x^2 - 2y = 0$ standard form $0 = \ell z - z^x \xi$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>6</td></tr> <tr><td>-1</td><td>1.5</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1.5</td></tr> <tr><td>2</td><td>6</td></tr> </table> | x | y | -2 | 6 | -1 | 1.5 | 0 | 0 | 1 | 1.5 | 2 | 6 |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 6 | | | | | | | | | | | | | | | | |
| -1 | 1.5 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | 1.5 | | | | | | | | | | | | | | | | |
| 2 | 6 | | | | | | | | | | | | | | | | |
|  | $y = 2x^2$ equation $z^x z = \ell$ | $(0, \frac{1}{8})$ foci $(\frac{8}{1}, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $2x^2 - y = 0$ standard form $0 = \ell - z^x \xi$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>8</td></tr> <tr><td>-1</td><td>2</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>2</td><td>8</td></tr> </table> | x | y | -2 | 8 | -1 | 2 | 0 | 0 | 1 | 2 | 2 | 8 |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 8 | | | | | | | | | | | | | | | | |
| -1 | 2 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | 2 | | | | | | | | | | | | | | | | |
| 2 | 8 | | | | | | | | | | | | | | | | |
|  | $y = 3x^2$ equation $z^x \xi = \ell$ | $(0, \frac{1}{12})$ foci $(\frac{12}{1}, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $3x^2 - y = 0$ standard form $0 = \ell - z^x \xi$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>12</td></tr> <tr><td>-1</td><td>3</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>3</td></tr> <tr><td>2</td><td>12</td></tr> </table> | x | y | -2 | 12 | -1 | 3 | 0 | 0 | 1 | 3 | 2 | 12 |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 12 | | | | | | | | | | | | | | | | |
| -1 | 3 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | 3 | | | | | | | | | | | | | | | | |
| 2 | 12 | | | | | | | | | | | | | | | | |
|  | $y = \frac{2}{3}x^2$ equation $z^x \frac{\xi}{2} = \ell$ | $(0, \frac{3}{8})$ foci $(\frac{8}{3}, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $2x^2 - 3y = 0$ standard form $0 = \ell \xi - z^x \xi$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-3</td><td>6</td></tr> <tr><td>-1</td><td>2/3</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>2/3</td></tr> <tr><td>3</td><td>6</td></tr> </table> | x | y | -3 | 6 | -1 | 2/3 | 0 | 0 | 1 | 2/3 | 3 | 6 |
| x | y | | | | | | | | | | | | | | | | |
| -3 | 6 | | | | | | | | | | | | | | | | |
| -1 | 2/3 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | 2/3 | | | | | | | | | | | | | | | | |
| 3 | 6 | | | | | | | | | | | | | | | | |
|  | $y = \frac{1}{2}x^2$ equation $z^x \frac{z}{1} = \ell$ | $(0, \frac{1}{2})$ foci $(\frac{2}{1}, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $x^2 - 2y = 0$ standard form $0 = \ell z - z^x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>8</td></tr> <tr><td>-2</td><td>2</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>4</td><td>8</td></tr> </table> | x | y | -4 | 8 | -2 | 2 | 0 | 0 | 2 | 2 | 4 | 8 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 8 | | | | | | | | | | | | | | | | |
| -2 | 2 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 2 | 2 | | | | | | | | | | | | | | | | |
| 4 | 8 | | | | | | | | | | | | | | | | |
|  | $y = \frac{1}{16}x^2$ equation $z^x \frac{91}{1} = \ell$ | $(0, 4)$ foci $(\neq, 0)$ | $e = 1$ eccentricity $\perp = \vartheta$ | $x^2 - 16y = 0$ standard form $0 = \ell 91 - z^x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>1</td></tr> <tr><td>-2</td><td>0.25</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>2</td><td>0.25</td></tr> <tr><td>4</td><td>1</td></tr> </table> | x | y | -4 | 1 | -2 | 0.25 | 0 | 0 | 2 | 0.25 | 4 | 1 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 1 | | | | | | | | | | | | | | | | |
| -2 | 0.25 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 2 | 0.25 | | | | | | | | | | | | | | | | |
| 4 | 1 | | | | | | | | | | | | | | | | |

The Algebra Game: Conic Sections Matching Card Sets

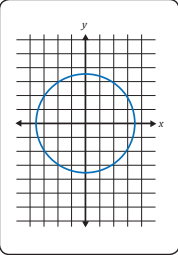
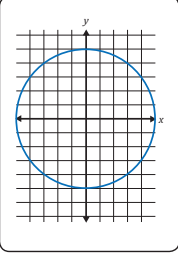
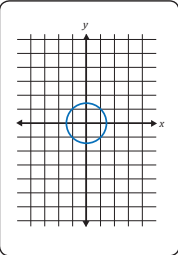
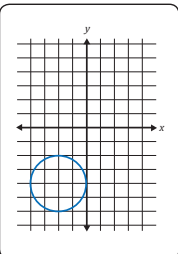
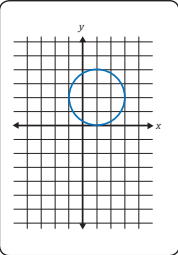
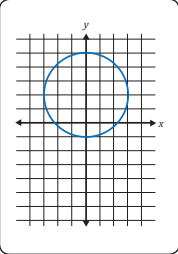
| Deck A (continued) | | | | | | | | | | | | | | | | | |
|---|--|---|---|---|--|---|---|----|----|----|------|----|----|----|------|----|----|
| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|  | $y = -\frac{1}{2}x^2$ equation $z^2x^{\frac{z}{1}} - = c$ | $(0, -\frac{1}{2})$ foci $(\frac{z}{1}, -c)$ | $e = 1$ eccentricity $\Gamma = \vartheta$ | $x^2 + 2y = 0$ standard form $0 = c^2z + z^2x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>-8</td></tr> <tr><td>-2</td><td>-2</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>2</td><td>-2</td></tr> <tr><td>4</td><td>-8</td></tr> </table> | x | y | -4 | -8 | -2 | -2 | 0 | 0 | 2 | -2 | 4 | -8 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | -8 | | | | | | | | | | | | | | | | |
| -2 | -2 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 2 | -2 | | | | | | | | | | | | | | | | |
| 4 | -8 | | | | | | | | | | | | | | | | |
|  | $y = \frac{1}{4}x^2$ equation $z^2x^{\frac{z}{1}} = c$ | $(0, 1)$ foci (Γ, c) | $e = 1$ eccentricity $\Gamma = \vartheta$ | $x^2 - 4y = 0$ standard form $0 = c^2z - z^2x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>4</td></tr> <tr><td>-2</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>2</td><td>1</td></tr> <tr><td>4</td><td>4</td></tr> </table> | x | y | -4 | 4 | -2 | 1 | 0 | 0 | 2 | 1 | 4 | 4 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 4 | | | | | | | | | | | | | | | | |
| -2 | 1 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | | | | | |
| 4 | 4 | | | | | | | | | | | | | | | | |
|  | $y = x^2$ equation $z^2x = c$ | $(0, \frac{1}{4})$ foci $(\frac{z}{1}, c)$ | $e = 1$ eccentricity $\Gamma = \vartheta$ | $x^2 - y = 0$ standard form $0 = c^2 - z^2x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>4</td></tr> <tr><td>-1</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>2</td><td>4</td></tr> </table> | x | y | -2 | 4 | -1 | 1 | 0 | 0 | 1 | 1 | 2 | 4 |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 4 | | | | | | | | | | | | | | | | |
| -1 | 1 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | 1 | | | | | | | | | | | | | | | | |
| 2 | 4 | | | | | | | | | | | | | | | | |
|  | $y = \frac{1}{2}x^2 - 2x$ equation $x^2z - z^2x^{\frac{z}{1}} = c$ | $(2, -1\frac{1}{2})$ foci $(\frac{z}{1}\Gamma, -c)$ | $e = 1$ eccentricity $\Gamma = \vartheta$ | $x^2 - 4x - 2y = 0$ standard form $0 = c^2z - x^2z + z^2x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>-1.5</td></tr> <tr><td>2</td><td>-2</td></tr> <tr><td>3</td><td>-1.5</td></tr> <tr><td>4</td><td>0</td></tr> </table> | x | y | 0 | 0 | 1 | -1.5 | 2 | -2 | 3 | -1.5 | 4 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| 1 | -1.5 | | | | | | | | | | | | | | | | |
| 2 | -2 | | | | | | | | | | | | | | | | |
| 3 | -1.5 | | | | | | | | | | | | | | | | |
| 4 | 0 | | | | | | | | | | | | | | | | |
|  | $y = x^2 + 4x + 4$ equation $z^2 + x^2z + z^2x = c$ | $(-2, \frac{1}{4})$ foci $(\frac{z}{1}\Gamma, c)$ | $e = 1$ eccentricity $\Gamma = \vartheta$ | $x^2 + 4x - y + 4 = 0$ standard form $0 = z^2 + x^2z - x^2z + z^2x$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>4</td></tr> <tr><td>-3</td><td>1</td></tr> <tr><td>-2</td><td>0</td></tr> <tr><td>-1</td><td>1</td></tr> <tr><td>0</td><td>4</td></tr> </table> | x | y | -4 | 4 | -3 | 1 | -2 | 0 | -1 | 1 | 0 | 4 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 4 | | | | | | | | | | | | | | | | |
| -3 | 1 | | | | | | | | | | | | | | | | |
| -2 | 0 | | | | | | | | | | | | | | | | |
| -1 | 1 | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | |
|  | $x = -y^2$ equation $z^2c = x$ | $(-\frac{1}{4}, 0)$ foci $(0, \frac{z}{1}c)$ | $e = 1$ eccentricity $\Gamma = \vartheta$ | $y^2 + x = 0$ standard form $0 = x + z^2c$ | coordinate pairs <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>-1</td><td>1</td></tr> <tr><td>-1</td><td>-1</td></tr> <tr><td>-4</td><td>2</td></tr> <tr><td>-4</td><td>-2</td></tr> </table> | x | y | 0 | 0 | -1 | 1 | -1 | -1 | -4 | 2 | -4 | -2 |
| x | y | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| -1 | 1 | | | | | | | | | | | | | | | | |
| -1 | -1 | | | | | | | | | | | | | | | | |
| -4 | 2 | | | | | | | | | | | | | | | | |
| -4 | -2 | | | | | | | | | | | | | | | | |

The Algebra Game: Conic Sections Matching Card Sets

Deck B

| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|---|---|---|---|---|--|---|---|----|---|----|------------|----|----|---|-------------|---|---|
|  | $1 = \frac{x^2}{9} + \frac{y^2}{9}$ <p>equation</p> $\frac{6}{z^A} + \frac{6}{z^X} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0'0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 - 9 = 0$ <p>standard form</p> $0 = 6 - z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-3</td><td>0</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>0</td><td>-3</td></tr> <tr><td>1</td><td>$\sqrt{8}$</td></tr> <tr><td>3</td><td>0</td></tr> </table> | x | y | -3 | 0 | 0 | 3 | 0 | -3 | 1 | $\sqrt{8}$ | 3 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -3 | 0 | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | |
| 0 | -3 | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{8}$ | | | | | | | | | | | | | | | | |
| 3 | 0 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(x+2)^2}{4} + \frac{(y-3)^2}{4}$ <p>equation</p> $\frac{1}{z(\varepsilon-A)} + \frac{1}{z(Z+X)} = 1$ | <p>(-2, 3)</p> <p>foci</p> <p>(\varepsilon'Z)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 + 4x - 6y + 9 = 0$ <p>standard form</p> $0 = 6 + A(9 - X^2 + Y^2) + z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>3</td></tr> <tr><td>-2</td><td>5</td></tr> <tr><td>-2</td><td>1</td></tr> <tr><td>0</td><td>3</td></tr> </table> | x | y | -4 | 3 | -2 | 5 | -2 | 1 | 0 | 3 | | |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 3 | | | | | | | | | | | | | | | | |
| -2 | 5 | | | | | | | | | | | | | | | | |
| -2 | 1 | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{4} + \frac{y^2}{4}$ <p>equation</p> $\frac{1}{z^A} + \frac{1}{z^X} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0'0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 - 4 = 0$ <p>standard form</p> $0 = 4 - z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>0</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>0</td><td>-2</td></tr> <tr><td>2</td><td>0</td></tr> </table> | x | y | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 0 | | | | | | | | | | | | | | | | |
| 0 | 2 | | | | | | | | | | | | | | | | |
| 0 | -2 | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{16} + \frac{y^2}{16}$ <p>equation</p> $\frac{9I}{z^A} + \frac{9I}{z^X} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0'0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 - 16 = 0$ <p>standard form</p> $0 = 9I - z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>0</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>0</td><td>-4</td></tr> <tr><td>2</td><td>$2\sqrt{3}$</td></tr> <tr><td>4</td><td>0</td></tr> </table> | x | y | -4 | 0 | 0 | 4 | 0 | -4 | 2 | $2\sqrt{3}$ | 4 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 0 | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | |
| 0 | -4 | | | | | | | | | | | | | | | | |
| 2 | $2\sqrt{3}$ | | | | | | | | | | | | | | | | |
| 4 | 0 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{1} + \frac{y^2}{1}$ <p>equation</p> $\frac{I}{z^A} + \frac{I}{z^X} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0'0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 - 1 = 0$ <p>standard form</p> $0 = 1 - z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-1</td><td>0</td></tr> <tr><td>0</td><td>1</td></tr> <tr><td>0</td><td>-1</td></tr> <tr><td>1</td><td>0</td></tr> </table> | x | y | -1 | 0 | 0 | 1 | 0 | -1 | 1 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -1 | 0 | | | | | | | | | | | | | | | | |
| 0 | 1 | | | | | | | | | | | | | | | | |
| 0 | -1 | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(x-2)^2}{9} + \frac{y^2}{9}$ <p>equation</p> $\frac{6}{z^A} + \frac{6}{z(Z-X)} = 1$ | <p>(2, 0)</p> <p>foci</p> <p>(0'Z)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = a$</p> | $x^2 + y^2 - 4x - 5 = 0$ <p>standard form</p> $0 = 5 - X^2 - Y^2 + z^A + z^X$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-1</td><td>0</td></tr> <tr><td>0</td><td>$\sqrt{5}$</td></tr> <tr><td>2</td><td>3</td></tr> <tr><td>2</td><td>-3</td></tr> <tr><td>5</td><td>0</td></tr> </table> | x | y | -1 | 0 | 0 | $\sqrt{5}$ | 2 | 3 | 2 | -3 | 5 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -1 | 0 | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{5}$ | | | | | | | | | | | | | | | | |
| 2 | 3 | | | | | | | | | | | | | | | | |
| 2 | -3 | | | | | | | | | | | | | | | | |
| 5 | 0 | | | | | | | | | | | | | | | | |

The Algebra Game: Conic Sections Matching Card Sets

| Deck B (continued) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|--|---|---|---|--------------|----|----|--------------|----|-------------|------------|-------------|-------------|---|---|---|
| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{12} + \frac{y^2}{12}$ <p>equation</p> $\frac{x^2}{z^2} + \frac{y^2}{z^2} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0, 0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 - 12 = 0$ <p>standard form</p> $0 = x^2 + y^2 + z^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>$-\sqrt{12}$</td><td>0</td></tr> <tr><td>0</td><td>$-\sqrt{12}$</td></tr> <tr><td>0</td><td>$\sqrt{12}$</td></tr> <tr><td>2</td><td>$\sqrt{8}$</td></tr> <tr><td>$\sqrt{12}$</td><td>0</td></tr> </table> | x | y | $-\sqrt{12}$ | 0 | 0 | $-\sqrt{12}$ | 0 | $\sqrt{12}$ | 2 | $\sqrt{8}$ | $\sqrt{12}$ | 0 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| $-\sqrt{12}$ | 0 | | | | | | | | | | | | | | | | | | |
| 0 | $-\sqrt{12}$ | | | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{12}$ | | | | | | | | | | | | | | | | | | |
| 2 | $\sqrt{8}$ | | | | | | | | | | | | | | | | | | |
| $\sqrt{12}$ | 0 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{25} + \frac{y^2}{25}$ <p>equation</p> $\frac{x^2}{z^2} + \frac{y^2}{z^2} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0, 0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 - 25 = 0$ <p>standard form</p> $0 = x^2 + y^2 + z^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>0</td><td>5</td></tr> <tr><td>0</td><td>-5</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>3</td><td>-4</td></tr> <tr><td>4</td><td>3</td></tr> <tr><td>5</td><td>0</td></tr> </table> | x | y | 0 | 5 | 0 | -5 | 3 | 4 | 3 | -4 | 4 | 3 | 5 | 0 |
| x | y | | | | | | | | | | | | | | | | | | |
| 0 | 5 | | | | | | | | | | | | | | | | | | |
| 0 | -5 | | | | | | | | | | | | | | | | | | |
| 3 | 4 | | | | | | | | | | | | | | | | | | |
| 3 | -4 | | | | | | | | | | | | | | | | | | |
| 4 | 3 | | | | | | | | | | | | | | | | | | |
| 5 | 0 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{2} + \frac{y^2}{2}$ <p>equation</p> $\frac{x^2}{z^2} + \frac{y^2}{z^2} = 1$ | <p>(0, 0)</p> <p>foci</p> <p>(0, 0)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 - 2 = 0$ <p>standard form</p> $0 = x^2 + y^2 + z^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>$-\sqrt{2}$</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>0</td><td>$\sqrt{2}$</td></tr> <tr><td>0</td><td>$-\sqrt{2}$</td></tr> <tr><td>$\sqrt{2}$</td><td>0</td></tr> </table> | x | y | $-\sqrt{2}$ | 0 | 1 | 1 | 0 | $\sqrt{2}$ | 0 | $-\sqrt{2}$ | $\sqrt{2}$ | 0 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| $-\sqrt{2}$ | 0 | | | | | | | | | | | | | | | | | | |
| 1 | 1 | | | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{2}$ | | | | | | | | | | | | | | | | | | |
| 0 | $-\sqrt{2}$ | | | | | | | | | | | | | | | | | | |
| $\sqrt{2}$ | 0 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(x+2)^2}{4} + \frac{(y+4)^2}{4}$ <p>equation</p> $\frac{(x+2)^2}{z^2} + \frac{(y+4)^2}{z^2} = 1$ | <p>(-2, -4)</p> <p>foci</p> <p>(-2, -4)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 + 4x + 8y + 16 = 0$ <p>standard form</p> $0 = x^2 + y^2 + 4x + 8y + z^2 + 16$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>-4</td></tr> <tr><td>-2</td><td>-2</td></tr> <tr><td>-2</td><td>-6</td></tr> <tr><td>0</td><td>-4</td></tr> </table> | x | y | -4 | -4 | -2 | -2 | -2 | -6 | 0 | -4 | | | | |
| x | y | | | | | | | | | | | | | | | | | | |
| -4 | -4 | | | | | | | | | | | | | | | | | | |
| -2 | -2 | | | | | | | | | | | | | | | | | | |
| -2 | -6 | | | | | | | | | | | | | | | | | | |
| 0 | -4 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(x-1)^2}{4} + \frac{(y-2)^2}{4}$ <p>equation</p> $\frac{(x-1)^2}{z^2} + \frac{(y-2)^2}{z^2} = 1$ | <p>(1, 2)</p> <p>foci</p> <p>(1, 2)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 - 2x - 4y + 1 = 0$ <p>standard form</p> $0 = x^2 + y^2 - 2x - 4y + z^2 + 1$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-1</td><td>2</td></tr> <tr><td>1</td><td>4</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>3</td><td>2</td></tr> </table> | x | y | -1 | 2 | 1 | 4 | 1 | 0 | 3 | 2 | | | | |
| x | y | | | | | | | | | | | | | | | | | | |
| -1 | 2 | | | | | | | | | | | | | | | | | | |
| 1 | 4 | | | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | | | |
| 3 | 2 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{9} + \frac{(y-2)^2}{9}$ <p>equation</p> $\frac{x^2}{z^2} + \frac{(y-2)^2}{z^2} = 1$ | <p>(0, 2)</p> <p>foci</p> <p>(0, 2)</p> | <p>$e = 0$</p> <p>eccentricity</p> <p>$0 = e$</p> | $x^2 + y^2 - 4y - 5 = 0$ <p>standard form</p> $0 = x^2 + y^2 - 4y + z^2 - 5$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-3</td><td>2</td></tr> <tr><td>0</td><td>-1</td></tr> <tr><td>0</td><td>5</td></tr> <tr><td>$\sqrt{8}$</td><td>1</td></tr> <tr><td>3</td><td>2</td></tr> </table> | x | y | -3 | 2 | 0 | -1 | 0 | 5 | $\sqrt{8}$ | 1 | 3 | 2 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| -3 | 2 | | | | | | | | | | | | | | | | | | |
| 0 | -1 | | | | | | | | | | | | | | | | | | |
| 0 | 5 | | | | | | | | | | | | | | | | | | |
| $\sqrt{8}$ | 1 | | | | | | | | | | | | | | | | | | |
| 3 | 2 | | | | | | | | | | | | | | | | | | |

The Algebra Game: Conic Sections Matching Card Sets

Deck C

| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|--------------|--|--|---|--|---|---|---|--------------|----|----|-------------|----|-------------|---|----|-------------|---|
| | $1 = \frac{(x+2)^2}{16} + \frac{(y+1)^2}{9}$ <p>equation</p> $\frac{6}{z^4} + \frac{9I}{z(z+x)} = 1$ | $\begin{pmatrix} -2+\sqrt{7} \\ -2-\sqrt{7} \end{pmatrix}, -1$ <p>foci</p> $\begin{pmatrix} 1-\sqrt{7} \\ 1+\sqrt{7} \end{pmatrix}, -2$ | $e = \frac{\sqrt{7}}{4}$ <p>eccentricity</p> $\frac{b}{z\sqrt{A}} = e$ | $9x^2 + 16y^2 + 36x + 32y - 92 = 0$ <p>standard form</p> $0 = 9x^2 + 16y^2 + 36x + 32y - 92$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-6</td><td>-1</td></tr> <tr><td>-2</td><td>2</td></tr> <tr><td>-2</td><td>-4</td></tr> <tr><td>2</td><td>-1</td></tr> </table> | x | y | -6 | -1 | -2 | 2 | -2 | -4 | 2 | -1 | | |
| x | y | | | | | | | | | | | | | | | | |
| -6 | -1 | | | | | | | | | | | | | | | | |
| -2 | 2 | | | | | | | | | | | | | | | | |
| -2 | -4 | | | | | | | | | | | | | | | | |
| 2 | -1 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{18} + \frac{y^2}{9}$ <p>equation</p> $\frac{6}{z^4} + \frac{8I}{z^2x} = 1$ | $\begin{pmatrix} +3 \\ -3 \end{pmatrix}, 0$ <p>foci</p> $\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 8 \end{pmatrix}$ | $e = \frac{\sqrt{2}}{2}$ <p>eccentricity</p> $\frac{z}{z\sqrt{A}} = e$ | $9x^2 + 18y^2 - 162 = 0$ <p>standard form</p> $0 = 9x^2 + 18y^2 - 162$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>$-\sqrt{18}$</td><td>0</td></tr> <tr><td>-4</td><td>1</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>4</td><td>1</td></tr> <tr><td>$\sqrt{18}$</td><td>0</td></tr> </table> | x | y | $-\sqrt{18}$ | 0 | -4 | 1 | 0 | 3 | 4 | 1 | $\sqrt{18}$ | 0 |
| x | y | | | | | | | | | | | | | | | | |
| $-\sqrt{18}$ | 0 | | | | | | | | | | | | | | | | |
| -4 | 1 | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | |
| 4 | 1 | | | | | | | | | | | | | | | | |
| $\sqrt{18}$ | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{16} + \frac{y^2}{2}$ <p>equation</p> $\frac{z}{z^4} + \frac{9I}{z^2x} = 1$ | $\begin{pmatrix} +\sqrt{14} \\ -\sqrt{14} \end{pmatrix}, 0$ <p>foci</p> $\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 14 \end{pmatrix}$ | $e = \frac{\sqrt{14}}{4}$ <p>eccentricity</p> $\frac{b}{z\sqrt{A}} = e$ | $2x^2 + 16y^2 - 32 = 0$ <p>standard form</p> $0 = 2x^2 + 16y^2 - 32$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>0</td></tr> <tr><td>0</td><td>$-\sqrt{2}$</td></tr> <tr><td>0</td><td>$\sqrt{2}$</td></tr> <tr><td>4</td><td>0</td></tr> </table> | x | y | -4 | 0 | 0 | $-\sqrt{2}$ | 0 | $\sqrt{2}$ | 4 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 0 | | | | | | | | | | | | | | | | |
| 0 | $-\sqrt{2}$ | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{2}$ | | | | | | | | | | | | | | | | |
| 4 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{9} + \frac{y^2}{18}$ <p>equation</p> $\frac{8I}{z^4} + \frac{6}{z^2x} = 1$ | $\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ +3 \end{pmatrix}$ <p>foci</p> $\begin{pmatrix} 8 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 3 \end{pmatrix}$ | $e = \frac{\sqrt{2}}{2}$ <p>eccentricity</p> $\frac{z}{z\sqrt{A}} = e$ | $18x^2 + 9y^2 - 162 = 0$ <p>standard form</p> $0 = 18x^2 + 9y^2 - 162$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-3</td><td>0</td></tr> <tr><td>-1</td><td>4</td></tr> <tr><td>0</td><td>$\sqrt{18}$</td></tr> <tr><td>1</td><td>4</td></tr> <tr><td>3</td><td>0</td></tr> </table> | x | y | -3 | 0 | -1 | 4 | 0 | $\sqrt{18}$ | 1 | 4 | 3 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -3 | 0 | | | | | | | | | | | | | | | | |
| -1 | 4 | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{18}$ | | | | | | | | | | | | | | | | |
| 1 | 4 | | | | | | | | | | | | | | | | |
| 3 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{(x+2)^2}{4} + \frac{y^2}{9}$ <p>equation</p> $\frac{6}{z^4} + \frac{b}{z(z+x)} = 1$ | $\begin{pmatrix} -2+\sqrt{5} \\ -2-\sqrt{5} \end{pmatrix}, -1$ <p>foci</p> $\begin{pmatrix} 5A-2 \\ 5A+2 \end{pmatrix}, -2$ | $e = \frac{\sqrt{5}}{3}$ <p>eccentricity</p> $\frac{b}{z\sqrt{A}} = e$ | $9x^2 + 4y^2 + 36x = 0$ <p>standard form</p> $0 = 9x^2 + 4y^2 + 36x$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>0</td></tr> <tr><td>-2</td><td>3</td></tr> <tr><td>-2</td><td>-3</td></tr> <tr><td>0</td><td>0</td></tr> </table> | x | y | -4 | 0 | -2 | 3 | -2 | -3 | 0 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 0 | | | | | | | | | | | | | | | | |
| -2 | 3 | | | | | | | | | | | | | | | | |
| -2 | -3 | | | | | | | | | | | | | | | | |
| 0 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{4} + \frac{y^2}{9}$ <p>equation</p> $\frac{6}{z^4} + \frac{b}{z^2x} = 1$ | $\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ +\sqrt{5} \end{pmatrix}$ <p>foci</p> $\begin{pmatrix} 5A-0 \\ 5A+0 \end{pmatrix}, 0$ | $e = \frac{\sqrt{5}}{3}$ <p>eccentricity</p> $\frac{b}{z\sqrt{A}} = e$ | $9x^2 + 4y^2 - 36 = 0$ <p>standard form</p> $0 = 9x^2 + 4y^2 - 36$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>0</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>0</td><td>-3</td></tr> <tr><td>2</td><td>0</td></tr> </table> | x | y | -2 | 0 | 0 | 3 | 0 | -3 | 2 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 0 | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | |
| 0 | -3 | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | |

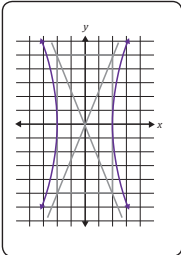
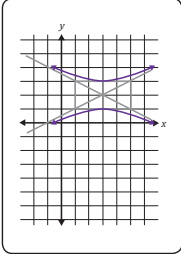
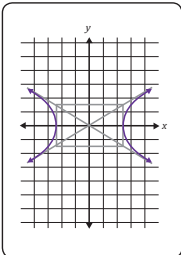
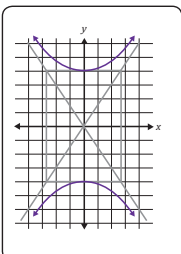
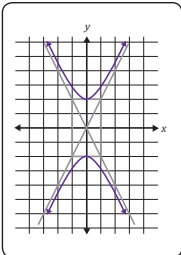
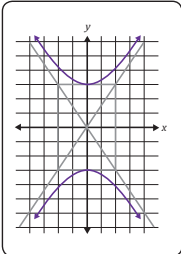
The Algebra Game: Conic Sections Matching Card Sets

Deck C (continued)

| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|-------------|---|---|--|---|---|---|---|-------------|-------------|-------------|------------|----|------------|-----|-------------|------------|---|
| | $1 = \frac{x^2}{2} + \frac{y^2}{16}$ <p>equation</p> $\frac{9x^2}{z^2} + \frac{z}{z^2} = 1$ | $(0, +\sqrt{14})$ $(0, -\sqrt{14})$ <p>foci</p> $(\frac{1}{2}\sqrt{14}, 0)$ $(\frac{1}{2}\sqrt{14}, 0)$ | $e = \frac{\sqrt{14}}{4}$ <p>eccentricity</p> $\frac{1}{2}\sqrt{14} = e$ | $16x^2 + 2y^2 - 32 = 0$ <p>standard form</p> $0 = 2z^2 - 2y^2 + z^2x^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>$-\sqrt{2}$</td><td>0</td></tr> <tr><td>-1</td><td>$\sqrt{8}$</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>$\sqrt{8}$</td></tr> <tr><td>$\sqrt{2}$</td><td>0</td></tr> </table> | x | y | $-\sqrt{2}$ | 0 | -1 | $\sqrt{8}$ | 0 | 4 | 1 | $\sqrt{8}$ | $\sqrt{2}$ | 0 |
| x | y | | | | | | | | | | | | | | | | |
| $-\sqrt{2}$ | 0 | | | | | | | | | | | | | | | | |
| -1 | $\sqrt{8}$ | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{8}$ | | | | | | | | | | | | | | | | |
| $\sqrt{2}$ | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{16} + \frac{y^2}{25}$ <p>equation</p> $\frac{5z}{z^2} + \frac{9x}{z^2} = 1$ | $(0, +3)$ $(0, -3)$ <p>foci</p> $(3, 0)$ $(3, 0)$ | $e = \frac{3}{5}$ <p>eccentricity</p> $\frac{3}{5} = e$ | $25x^2 + 16y^2 - 400 = 0$ <p>standard form</p> $0 = 004z^2 - 16y^2 + 25x^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>0</td></tr> <tr><td>0</td><td>5</td></tr> <tr><td>0</td><td>-5</td></tr> <tr><td>4</td><td>0</td></tr> </table> | x | y | -4 | 0 | 0 | 5 | 0 | -5 | 4 | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 0 | | | | | | | | | | | | | | | | |
| 0 | 5 | | | | | | | | | | | | | | | | |
| 0 | -5 | | | | | | | | | | | | | | | | |
| 4 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{1} + \frac{y^2}{4}$ <p>equation</p> $\frac{1}{z^2} + \frac{1}{z^2} = 1$ | $(0, +\sqrt{3})$ $(0, -\sqrt{3})$ <p>foci</p> $(\frac{3}{2}, 0)$ $(\frac{3}{2}, 0)$ | $e = \frac{\sqrt{3}}{2}$ <p>eccentricity</p> $\frac{z}{\sqrt{3}} = e$ | $4x^2 + y^2 - 4 = 0$ <p>standard form</p> $0 = 4z^2 + y^2 - 4 = 0$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-1</td><td>0</td></tr> <tr><td>-0.5</td><td>$\sqrt{3}$</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>0.5</td><td>$\sqrt{3}$</td></tr> <tr><td>1</td><td>0</td></tr> </table> | x | y | -1 | 0 | -0.5 | $\sqrt{3}$ | 0 | 2 | 0.5 | $\sqrt{3}$ | 1 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -1 | 0 | | | | | | | | | | | | | | | | |
| -0.5 | $\sqrt{3}$ | | | | | | | | | | | | | | | | |
| 0 | 2 | | | | | | | | | | | | | | | | |
| 0.5 | $\sqrt{3}$ | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{6} + \frac{y^2}{3}$ <p>equation</p> $\frac{3}{z^2} + \frac{9}{z^2} = 1$ | $(+\sqrt{3}, 0)$ $(-\sqrt{3}, 0)$ <p>foci</p> $(0, \frac{3}{2})$ $(0, \frac{3}{2})$ | $e = \frac{\sqrt{2}}{2}$ <p>eccentricity</p> $\frac{z}{\sqrt{2}} = e$ | $3x^2 + 6y^2 - 18 = 0$ <p>standard form</p> $0 = 0 = 18 - z^2 + 6y^2 + z^2x^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>1</td></tr> <tr><td>$-\sqrt{6}$</td><td>0</td></tr> <tr><td>0</td><td>$\sqrt{3}$</td></tr> <tr><td>2</td><td>1</td></tr> <tr><td>$\sqrt{6}$</td><td>0</td></tr> </table> | x | y | -2 | 1 | $-\sqrt{6}$ | 0 | 0 | $\sqrt{3}$ | 2 | 1 | $\sqrt{6}$ | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -2 | 1 | | | | | | | | | | | | | | | | |
| $-\sqrt{6}$ | 0 | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{3}$ | | | | | | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | | | | | | |
| $\sqrt{6}$ | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{x^2}{4} + \frac{y^2}{16}$ <p>equation</p> $\frac{9x}{z^2} + \frac{1}{z^2} = 1$ | $(0, +\sqrt{12})$ $(0, -\sqrt{12})$ <p>foci</p> $(\frac{1}{2}\sqrt{12}, 0)$ $(\frac{1}{2}\sqrt{12}, 0)$ | $e = \frac{\sqrt{12}}{4}$ <p>eccentricity</p> $\frac{1}{2}\sqrt{12} = e$ | $16x^2 + 4y^2 - 64 = 0$ <p>standard form</p> $0 = 64 - 4y^2 + 16x^2$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-1</td><td>$\sqrt{12}$</td></tr> <tr><td>-2</td><td>0</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>$\sqrt{12}$</td></tr> <tr><td>2</td><td>0</td></tr> </table> | x | y | -1 | $\sqrt{12}$ | -2 | 0 | 0 | 4 | 1 | $\sqrt{12}$ | 2 | 0 |
| x | y | | | | | | | | | | | | | | | | |
| -1 | $\sqrt{12}$ | | | | | | | | | | | | | | | | |
| -2 | 0 | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{12}$ | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | |
| | $1 = \frac{(x+2)^2}{4} + \frac{(y-1)^2}{16}$ <p>equation</p> $\frac{9x}{z^2} + \frac{1}{z^2} = 1$ | $(-2, 1 + \sqrt{12})$ $(-2, 1 - \sqrt{12})$ <p>foci</p> $(\frac{1}{2}\sqrt{12}, -2)$ $(\frac{1}{2}\sqrt{12}, -2)$ | $e = \frac{\sqrt{12}}{4}$ <p>eccentricity</p> $\frac{1}{2}\sqrt{12} = e$ | $16x^2 + 4y^2 + 64x - 8y + 4 = 0$ <p>standard form</p> $0 = 64 - 8y + 16x^2 + 64x - 8y + 4 = 0$ | <p>coordinate pairs</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>-4</td><td>1</td></tr> <tr><td>-2</td><td>5</td></tr> <tr><td>-2</td><td>-3</td></tr> <tr><td>0</td><td>1</td></tr> </table> | x | y | -4 | 1 | -2 | 5 | -2 | -3 | 0 | 1 | | |
| x | y | | | | | | | | | | | | | | | | |
| -4 | 1 | | | | | | | | | | | | | | | | |
| -2 | 5 | | | | | | | | | | | | | | | | |
| -2 | -3 | | | | | | | | | | | | | | | | |
| 0 | 1 | | | | | | | | | | | | | | | | |

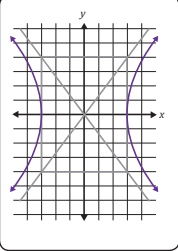
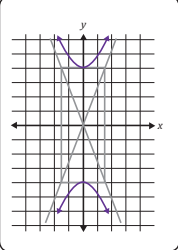
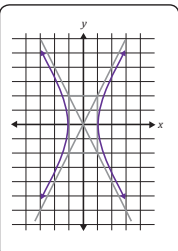
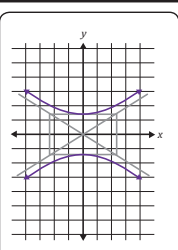
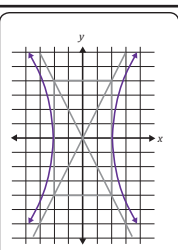
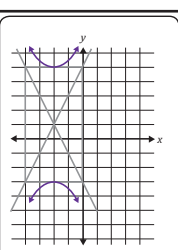
The Algebra Game: Conic Sections Matching Card Sets

Deck D

| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | |
|---|---|---|---|--|--|---|---|-------------|-------------|-------------|-------------|------------|----|------------|-------------|-------|-------------|
|  | $1 = \frac{x^2}{4} - \frac{y^2}{25}$ <p>equation</p> $\frac{x^2}{z^2} - \frac{y^2}{25} = 1$ | $(+\sqrt{29}, 0)$ $(-\sqrt{29}, 0)$ <p>foci</p> $(0, \sqrt{29})$ $(0, -\sqrt{29})$ | $e = \frac{\sqrt{29}}{2}$ <p>eccentricity</p> $\frac{z}{2} = a$ | $25x^2 - 4y^2 - 100 = 0$ <p>standard form</p> $0 = 25x^2 - 4y^2 - 100$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>3.124</td><td>6</td></tr> <tr><td>2.828</td><td>5</td></tr> <tr><td>2</td><td>0</td></tr> <tr><td>2.828</td><td>-5</td></tr> <tr><td>3.124</td><td>-6</td></tr> </tbody> </table> | x | y | 3.124 | 6 | 2.828 | 5 | 2 | 0 | 2.828 | -5 | 3.124 | -6 |
| x | y | | | | | | | | | | | | | | | | |
| 3.124 | 6 | | | | | | | | | | | | | | | | |
| 2.828 | 5 | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | |
| 2.828 | -5 | | | | | | | | | | | | | | | | |
| 3.124 | -6 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(y-2)^2}{1} - \frac{(x-3)^2}{4}$ <p>equation</p> $\frac{(y-2)^2}{1} - \frac{(x-3)^2}{4} = 1$ | $(3, 2 + \sqrt{5})$ $(3, 2 - \sqrt{5})$ <p>foci</p> $(3, 2 + \sqrt{5})$ $(3, 2 - \sqrt{5})$ | $e = \frac{\sqrt{5}}{1}$ <p>eccentricity</p> $\frac{1}{1} = a$ | $x^2 - 4y^2 - 6x + 16y - 3 = 0$ <p>standard form</p> $0 = x^2 - 4y^2 - 6x + 16y - 3$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>2</td><td>3.118</td></tr> <tr><td>2</td><td>0.882</td></tr> <tr><td>3</td><td>3</td></tr> <tr><td>3</td><td>1</td></tr> <tr><td>4</td><td>3.118</td></tr> </tbody> </table> | x | y | 2 | 3.118 | 2 | 0.882 | 3 | 3 | 3 | 1 | 4 | 3.118 |
| x | y | | | | | | | | | | | | | | | | |
| 2 | 3.118 | | | | | | | | | | | | | | | | |
| 2 | 0.882 | | | | | | | | | | | | | | | | |
| 3 | 3 | | | | | | | | | | | | | | | | |
| 3 | 1 | | | | | | | | | | | | | | | | |
| 4 | 3.118 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{6} - \frac{y^2}{3}$ <p>equation</p> $\frac{x^2}{6} - \frac{y^2}{3} = 1$ | $(+\sqrt{3}, 0)$ $(-\sqrt{3}, 0)$ <p>foci</p> $(0, \sqrt{3})$ $(0, -\sqrt{3})$ | $e = \frac{\sqrt{6}}{2}$ <p>eccentricity</p> $\frac{z}{2} = a$ | $3x^2 - 6y^2 - 18 = 0$ <p>standard form</p> $0 = 3x^2 - 6y^2 - 18$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>$\sqrt{14}$</td><td>-2</td></tr> <tr><td>$\sqrt{12}$</td><td>$-\sqrt{3}$</td></tr> <tr><td>$\sqrt{8}$</td><td>-1</td></tr> <tr><td>$\sqrt{6}$</td><td>0</td></tr> </tbody> </table> | x | y | $\sqrt{14}$ | -2 | $\sqrt{12}$ | $-\sqrt{3}$ | $\sqrt{8}$ | -1 | $\sqrt{6}$ | 0 | | |
| x | y | | | | | | | | | | | | | | | | |
| $\sqrt{14}$ | -2 | | | | | | | | | | | | | | | | |
| $\sqrt{12}$ | $-\sqrt{3}$ | | | | | | | | | | | | | | | | |
| $\sqrt{8}$ | -1 | | | | | | | | | | | | | | | | |
| $\sqrt{6}$ | 0 | | | | | | | | | | | | | | | | |
|  | $1 = \frac{y^2}{16} - \frac{x^2}{8}$ <p>equation</p> $\frac{y^2}{16} - \frac{x^2}{8} = 1$ | $(0, +\sqrt{24})$ $(0, -\sqrt{24})$ <p>foci</p> $(\sqrt{24}, 0)$ $(-\sqrt{24}, 0)$ | $e = \frac{\sqrt{6}}{2}$ <p>eccentricity</p> $\frac{z}{2} = a$ | $16x^2 - 8y^2 + 128 = 0$ <p>standard form</p> $0 = 16x^2 - 8y^2 + 128$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>-2</td><td>$\sqrt{24}$</td></tr> <tr><td>-1</td><td>$\sqrt{18}$</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>$\sqrt{18}$</td></tr> <tr><td>2</td><td>$\sqrt{24}$</td></tr> </tbody> </table> | x | y | -2 | $\sqrt{24}$ | -1 | $\sqrt{18}$ | 0 | 4 | 1 | $\sqrt{18}$ | 2 | $\sqrt{24}$ |
| x | y | | | | | | | | | | | | | | | | |
| -2 | $\sqrt{24}$ | | | | | | | | | | | | | | | | |
| -1 | $\sqrt{18}$ | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{18}$ | | | | | | | | | | | | | | | | |
| 2 | $\sqrt{24}$ | | | | | | | | | | | | | | | | |
|  | $1 = \frac{y^2}{4} - \frac{x^2}{1}$ <p>equation</p> $\frac{y^2}{4} - \frac{x^2}{1} = 1$ | $(0, +\sqrt{5})$ $(0, -\sqrt{5})$ <p>foci</p> $(\sqrt{5}, 0)$ $(-\sqrt{5}, 0)$ | $e = \frac{\sqrt{5}}{2}$ <p>eccentricity</p> $\frac{z}{2} = a$ | $-4x^2 + y^2 - 4 = 0$ <p>standard form</p> $0 = -4x^2 + y^2 - 4$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>-3</td><td>$\sqrt{40}$</td></tr> <tr><td>-1</td><td>$\sqrt{8}$</td></tr> <tr><td>0</td><td>2</td></tr> <tr><td>1</td><td>$\sqrt{8}$</td></tr> <tr><td>3</td><td>$\sqrt{40}$</td></tr> </tbody> </table> | x | y | -3 | $\sqrt{40}$ | -1 | $\sqrt{8}$ | 0 | 2 | 1 | $\sqrt{8}$ | 3 | $\sqrt{40}$ |
| x | y | | | | | | | | | | | | | | | | |
| -3 | $\sqrt{40}$ | | | | | | | | | | | | | | | | |
| -1 | $\sqrt{8}$ | | | | | | | | | | | | | | | | |
| 0 | 2 | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{8}$ | | | | | | | | | | | | | | | | |
| 3 | $\sqrt{40}$ | | | | | | | | | | | | | | | | |
|  | $1 = \frac{y^2}{9} - \frac{x^2}{4}$ <p>equation</p> $\frac{y^2}{9} - \frac{x^2}{4} = 1$ | $(0, +\sqrt{13})$ $(0, -\sqrt{13})$ <p>foci</p> $(\sqrt{13}, 0)$ $(-\sqrt{13}, 0)$ | $e = \frac{\sqrt{13}}{3}$ <p>eccentricity</p> $\frac{x}{3} = a$ | $9x^2 - 4y^2 + 36 = 0$ <p>standard form</p> $0 = 9x^2 - 4y^2 + 36$ | <p>coordinate pairs</p> <table border="1"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr><td>-3</td><td>5.408</td></tr> <tr><td>-1</td><td>3.354</td></tr> <tr><td>0</td><td>3</td></tr> <tr><td>1</td><td>3.354</td></tr> <tr><td>3</td><td>5.408</td></tr> </tbody> </table> | x | y | -3 | 5.408 | -1 | 3.354 | 0 | 3 | 1 | 3.354 | 3 | 5.408 |
| x | y | | | | | | | | | | | | | | | | |
| -3 | 5.408 | | | | | | | | | | | | | | | | |
| -1 | 3.354 | | | | | | | | | | | | | | | | |
| 0 | 3 | | | | | | | | | | | | | | | | |
| 1 | 3.354 | | | | | | | | | | | | | | | | |
| 3 | 5.408 | | | | | | | | | | | | | | | | |

The Algebra Game: Conic Sections Matching Card Sets

Deck D (continued)

| Graph | Equation | Foci | Eccentricity | Standard Form | Coordinate Pair | | | | | | | | | | | | | | |
|---|--|---|---|--|---|---|---|-------|-------------|-------|-------------|----|------------|-------|-------------|-------|-------------|---|--------|
|  | $1 = \frac{x^2}{9} - \frac{y^2}{16}$ <p>equation</p> $\frac{9x^2}{z^2} - \frac{6y^2}{z^2} = 1$ | $(+5, 0)$ $(-5, 0)$ <p>foci</p> $(0, \pm 5)$ $(0, \pm 5)$ | $e = \frac{5}{3}$ <p>eccentricity</p> $\frac{5}{3} = e$ | $16x^2 - 9y^2 - 144 = 0$ <p>standard form</p> $0 = 16x^2 - 9y^2 - 144$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>3.75</td><td>-3</td></tr> <tr><td>3.092</td><td>-1</td></tr> <tr><td>3</td><td>0</td></tr> <tr><td>3.092</td><td>1</td></tr> <tr><td>3.75</td><td>3</td></tr> </table> | x | y | 3.75 | -3 | 3.092 | -1 | 3 | 0 | 3.092 | 1 | 3.75 | 3 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| 3.75 | -3 | | | | | | | | | | | | | | | | | | |
| 3.092 | -1 | | | | | | | | | | | | | | | | | | |
| 3 | 0 | | | | | | | | | | | | | | | | | | |
| 3.092 | 1 | | | | | | | | | | | | | | | | | | |
| 3.75 | 3 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{y^2}{16} - \frac{x^2}{2}$ <p>equation</p> $\frac{2y^2}{z^2} - \frac{9x^2}{z^2} = 1$ | $(0, +\sqrt{18})$ $(0, -\sqrt{18})$ <p>foci</p> $(\pm 1, 0)$ $(\pm 1, 0)$ | $e = \frac{3\sqrt{2}}{4}$ <p>eccentricity</p> $\frac{3\sqrt{2}}{4} = e$ | $16x^2 - 2y^2 + 32 = 0$ <p>standard form</p> $0 = 16x^2 - 2y^2 + 32$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>-2</td><td>$\sqrt{48}$</td></tr> <tr><td>-1</td><td>$\sqrt{24}$</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>$\sqrt{24}$</td></tr> <tr><td>2</td><td>$\sqrt{48}$</td></tr> </table> | x | y | -2 | $\sqrt{48}$ | -1 | $\sqrt{24}$ | 0 | 4 | 1 | $\sqrt{24}$ | 2 | $\sqrt{48}$ | | |
| x | y | | | | | | | | | | | | | | | | | | |
| -2 | $\sqrt{48}$ | | | | | | | | | | | | | | | | | | |
| -1 | $\sqrt{24}$ | | | | | | | | | | | | | | | | | | |
| 0 | 4 | | | | | | | | | | | | | | | | | | |
| 1 | $\sqrt{24}$ | | | | | | | | | | | | | | | | | | |
| 2 | $\sqrt{48}$ | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{1} - \frac{y^2}{4}$ <p>equation</p> $\frac{4x^2}{z^2} - \frac{1y^2}{z^2} = 1$ | $(+\sqrt{5}, 0)$ $(-\sqrt{5}, 0)$ <p>foci</p> $(0, \pm 5)$ $(0, \pm 5)$ | $e = \frac{\sqrt{5}}{1}$ <p>eccentricity</p> $\frac{1}{\sqrt{5}} = e$ | $4x^2 - y^2 - 4 = 0$ <p>standard form</p> $0 = 4x^2 - y^2 - 4$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>1.803</td><td>-3</td></tr> <tr><td>1.118</td><td>-1</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>1.118</td><td>1</td></tr> <tr><td>1.803</td><td>3</td></tr> </table> | x | y | 1.803 | -3 | 1.118 | -1 | 1 | 0 | 1.118 | 1 | 1.803 | 3 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| 1.803 | -3 | | | | | | | | | | | | | | | | | | |
| 1.118 | -1 | | | | | | | | | | | | | | | | | | |
| 1 | 0 | | | | | | | | | | | | | | | | | | |
| 1.118 | 1 | | | | | | | | | | | | | | | | | | |
| 1.803 | 3 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{y^2}{2} - \frac{x^2}{5}$ <p>equation</p> $\frac{5y^2}{z^2} - \frac{2x^2}{z^2} = 1$ | $(0, +\sqrt{7})$ $(0, -\sqrt{7})$ <p>foci</p> $(\pm 1, 0)$ $(\pm 1, 0)$ | $e = \frac{\sqrt{14}}{2}$ <p>eccentricity</p> $\frac{2}{\sqrt{14}} = e$ | $2x^2 - 5y^2 + 10 = 0$ <p>standard form</p> $0 = 2x^2 - 5y^2 + 10$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>-3</td><td>2.366</td></tr> <tr><td>-1</td><td>1.549</td></tr> <tr><td>0</td><td>$\sqrt{2}$</td></tr> <tr><td>1</td><td>1.549</td></tr> <tr><td>3</td><td>2.366</td></tr> </table> | x | y | -3 | 2.366 | -1 | 1.549 | 0 | $\sqrt{2}$ | 1 | 1.549 | 3 | 2.366 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| -3 | 2.366 | | | | | | | | | | | | | | | | | | |
| -1 | 1.549 | | | | | | | | | | | | | | | | | | |
| 0 | $\sqrt{2}$ | | | | | | | | | | | | | | | | | | |
| 1 | 1.549 | | | | | | | | | | | | | | | | | | |
| 3 | 2.366 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{x^2}{4} - \frac{y^2}{16}$ <p>equation</p> $\frac{9x^2}{z^2} - \frac{4y^2}{z^2} = 1$ | $(+\sqrt{20}, 0)$ $(-\sqrt{20}, 0)$ <p>foci</p> $(0, \pm 20)$ $(0, \pm 20)$ | $e = \frac{\sqrt{5}}{1}$ <p>eccentricity</p> $\frac{1}{\sqrt{5}} = e$ | $16x^2 - 4y^2 - 64 = 0$ <p>standard form</p> $0 = 16x^2 - 4y^2 - 64$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>2.5</td><td>-3</td></tr> <tr><td>2.062</td><td>-1</td></tr> <tr><td>2</td><td>0</td></tr> <tr><td>2.062</td><td>1</td></tr> <tr><td>2.5</td><td>3</td></tr> </table> | x | y | 2.5 | -3 | 2.062 | -1 | 2 | 0 | 2.062 | 1 | 2.5 | 3 | | |
| x | y | | | | | | | | | | | | | | | | | | |
| 2.5 | -3 | | | | | | | | | | | | | | | | | | |
| 2.062 | -1 | | | | | | | | | | | | | | | | | | |
| 2 | 0 | | | | | | | | | | | | | | | | | | |
| 2.062 | 1 | | | | | | | | | | | | | | | | | | |
| 2.5 | 3 | | | | | | | | | | | | | | | | | | |
|  | $1 = \frac{(y-1)^2}{16} - \frac{(x+2)^2}{4}$ <p>equation</p> $\frac{4(y-1)^2}{z^2} - \frac{9(x+2)^2}{z^2} = 1$ | $(-2, 1+\sqrt{20})$ $(-2, 1-\sqrt{20})$ <p>foci</p> $(0, \pm 20)$ $(0, \pm 20)$ | $e = \frac{\sqrt{5}}{2}$ <p>eccentricity</p> $\frac{2}{\sqrt{5}} = e$ | $16x^2 - 4y^2 + 64x + 8y + 124 = 0$ <p>standard form</p> $0 = 16x^2 - 4y^2 + 64x + 8y + 124$ | <p>coordinate pairs</p> <table border="1"> <tr><th>x</th><th>y</th></tr> <tr><td>-3</td><td>5.472</td></tr> <tr><td>-3</td><td>-3.472</td></tr> <tr><td>-2</td><td>5</td></tr> <tr><td>-2</td><td>-3</td></tr> <tr><td>0</td><td>6.656</td></tr> <tr><td>0</td><td>-4.657</td></tr> </table> | x | y | -3 | 5.472 | -3 | -3.472 | -2 | 5 | -2 | -3 | 0 | 6.656 | 0 | -4.657 |
| x | y | | | | | | | | | | | | | | | | | | |
| -3 | 5.472 | | | | | | | | | | | | | | | | | | |
| -3 | -3.472 | | | | | | | | | | | | | | | | | | |
| -2 | 5 | | | | | | | | | | | | | | | | | | |
| -2 | -3 | | | | | | | | | | | | | | | | | | |
| 0 | 6.656 | | | | | | | | | | | | | | | | | | |
| 0 | -4.657 | | | | | | | | | | | | | | | | | | |