



Quadratic Equation Standard Form to Vertex (Coefficient -N)

1 Complete the square and convert this to vertex form to find the vertex

$$y = -3x^2 - 24x - 52$$

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|---|----------|---|----------|
| A | (-4, -4) | B | (-3, -4) |
| C | (-4, 4) | D | (4, -4) |

2 Complete the square and convert this to vertex form to find the vertex

$$y = -4x^2 - 8x - 5$$

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|---|----------|---|----------|
| A | (-1, 1) | B | (-4, -1) |
| C | (-1, -1) | D | (1, -1) |

3 Complete the square and convert this to vertex form to find the vertex

$$y = -4x^2 + 16x - 12$$

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|---|---------|---|---------|
| A | (2, -4) | B | (-4, 4) |
| C | (4, 2) | D | (2, 4) |
| E | (-2, 4) | F | (-4, 2) |

4 Complete the square and convert this to vertex form to find the vertex

$$y = -5x^2 - 10x - 3$$

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|---|----------|---|----------|
| A | (1, 2) | B | (2, -1) |
| C | (-1, 2) | D | (-5, -1) |
| E | (-1, -2) | F | (-5, 2) |

5 Complete the square and convert this to vertex form to find the vertex

$$y = -5x^2 + 10x - 6$$

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|---|---------|---|----------|
| A | (1, 1) | B | (-5, 1) |
| C | (1, -1) | D | (-5, -1) |
| E | (-1, 1) | F | (-1, -1) |

6 Complete the square and convert this to vertex form to find the vertex

$$y = -5x^2 + 30x - 44$$

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|---|---------|---|---------|
| A | (-5, 3) | B | (-5, 1) |
| C | (-3, 1) | D | (3, 1) |
| E | (1, 3) | F | (3, -1) |

7 Complete the square and convert this to vertex form to find the vertex

$$y = -3x^2 - 24x - 49$$

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|---|----------|---|----------|
| A | (-4, -1) | B | (4, -1) |
| C | (-3, -1) | D | (-1, -4) |
| E | (-3, -4) | F | (-4, 1) |

8 Complete the square and convert this to vertex form to find the vertex

$$y = -4x^2 + 24x - 35$$

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|---|---------|---|---------|
| A | (3, 1) | B | (1, 3) |
| C | (-4, 3) | D | (-3, 1) |
| E | (3, -1) | F | (-4, 1) |