Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations ALPHA NO Graphing Calculator Hour\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a function  Description automatically generatedThis is $f(x) = x^{3}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -2 | -1 | 0 | 1 | 2 |
| f(x) | -8 | -1 | 0 | 1 | 8 |

 | Sketch a$\left(x\right)=4x^{3}+2$ and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=2\left(x-3\right)^{3}+1$and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations BETA NO Graphing Calculator Hour\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a function  Description automatically generatedThis is $f(x) = x^{3}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -2 | -1 | 0 | 1 | 2 |
| f(x) | -8 | -1 | 0 | 1 | 8 |

 | Sketch a$\left(x\right)=4x^{3}+2$ and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=2\left(x-3\right)^{3}+1$and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |
| A graph of a line graph  Description automatically generatedThis is $f(x) =\sqrt{x}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -4 | -1 | 0 | 1 | 4 |
| f(x) | und | und | 0 | 1 | 2 |

 | Sketch a$\left(x\right)=-2\sqrt{x}+6$ and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=\frac{1}{4}\sqrt{x+2}-4$and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a line graph  Description automatically generatedThis is $f(x) =\sqrt{x}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -4 | -1 | 0 | 1 | 4 |
| f(x) | und | und | 0 | 1 | 2 |

 | Sketch a$\left(x\right)=6\sqrt{x}-2$ and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=\frac{-1}{5}\sqrt{x+5}$+10and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations DELTA NO Graphing Calculator Hour\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a function  Description automatically generatedThis is $f(x) = x^{3}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -2 | -1 | 0 | 1 | 2 |
| f(x) | -8 | -1 | 0 | 1 | 8 |

 | Sketch a$\left(x\right)=-3x^{3}-8$ and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=5\left(x+4\right)^{3}-1$and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations GAMMA NO Graphing Calculator Hour\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a function  Description automatically generatedThis is $f(x) = x^{3}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -2 | -1 | 0 | 1 | 2 |
| f(x) | -8 | -1 | 0 | 1 | 8 |

 | Sketch a$\left(x\right)=10x^{3}-8$ and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=-4\left(x-5\right)^{3}-7$and complete the table below.

|  |  |
| --- | --- |
| State point of inflection ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |
| A graph of a line graph  Description automatically generatedThis is $f(x) =\sqrt{x}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -4 | -1 | 0 | 1 | 4 |
| f(x) | und | und | 0 | 1 | 2 |

 | Sketch a$\left(x\right)=-5\sqrt{x-10}+1$ and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=\frac{3}{4}\sqrt{x-4}$and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A graph of a line graph  Description automatically generatedThis is $f(x) =\sqrt{x}$

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x | -4 | -1 | 0 | 1 | 4 |
| f(x) | und | und | 0 | 1 | 2 |

 | Sketch a$\left(x\right)=8\sqrt{x+5}$ and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 | Sketch b$\left(x\right)=\frac{-2}{5}\sqrt{x-9}$and complete the table below.

|  |  |
| --- | --- |
| State extreme point ( , ) | State y intercept( , ) |
| State any other point ( , ) | State any other point ( , ) |

 |

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations ALPHA WITH Graphing Calculator Hour\_\_\_\_\_\_

* Write a cubic function that is a vertical reflection\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical stretch\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical compression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 2, -5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -3, 4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -4, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 0, 6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations BETA WITH Graphing Calculator Hour\_\_\_\_\_\_

* Write a cubic function that is a vertical reflection\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical stretch\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical compression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -5, 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 7, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 8, -3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 0, -9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a horizontal shift \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical reflection and a horizontal shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 10, -1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( -3, 5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 9, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 0, -8) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a horizontal shift \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical reflection and a horizontal shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 10, -1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( -3, 5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 9, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 0, -8) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations DELTA WITH Graphing Calculator Hour\_\_\_\_\_\_

* Write a cubic function that is a vertical reflection\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical stretch\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical compression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 4, -3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -8, 7) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 0, 11) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -13, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FA Function Transformations GAMMA WITH Graphing Calculator Hour\_\_\_\_\_\_

* Write a cubic function that is a vertical reflection\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical stretch\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that is a vertical compression\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 4, 17) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -9, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( -4, -15) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a cubic function that shifts its point of inflection to the point ( 0, 19) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a horizontal shift \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical reflection and a horizontal shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( -12, -4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 4, -23) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( -8, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 0, 17) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a horizontal shift \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that is a vertical reflection and a horizontal shift\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( -16, 10) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 30, -15) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 0, -14) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Write a square root function that shifts its extreme point to the point ( 16, 0) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_