***Directions: Graph each function. Talk about the domain and range, intervals where the parabola is increasing and decreasing, positive and negative, state minimums and maximums, and end behavior.***

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| 1. $f\left(x\right)=2x^{2}+4x-3$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ | 1. $f\left(x\right)=-\frac{1}{2}x^{2}+3x+1$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ |
| 1. $f\left(x\right)=\frac{1}{4}(x-4)^{2}-4$

 Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ | 1. $f\left(x\right)=-(x+3)^{2}+4$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ |
| 1. $f\left(x\right)=4x^{2}-16x+11$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ | 1. $f\left(x\right)=\frac{1}{4}x^{2}+2x-1$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ |
| 1. $f\left(x\right)=-3(x+2)^{2}+6$

 Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ | 1. $f\left(x\right)=2(x-2)^{2}-5$

Vertex: \_\_\_\_\_\_\_\_ Axis of Symmetry: \_\_\_\_\_\_\_\_y intercept: \_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_ Range:\_\_\_\_\_\_\_Increasing:\_\_\_\_\_\_\_ Decreasing:\_\_\_\_\_\_\_\_x value where y is positive: \_\_\_\_\_\_\_x value where y is negative: \_\_\_\_\_\_\_Minimum MaximumAs x→∞f(x)→\_\_\_\_\_\_As x→-∞f(x)→\_\_\_\_\_\_ |