

1.4.D1 - FUNCTIONS & THEIR CHARACTERISTICS

Identify the appropriate function family OR families whose graph has the given characteristics.

LINEAR FUNCTIONS

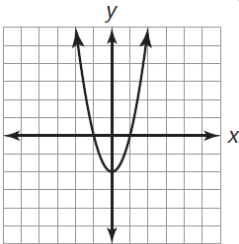
Quadratic Functions

Exponential Functions

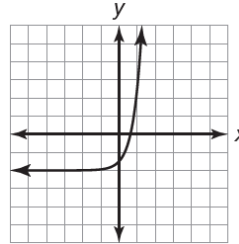
Linear Absolute Value Functions

1. The graph of this function family is a straight line.
2. The graph of this function family has an increasing interval and a decreasing interval.
3. The graph of this function family has an absolute minimum.
4. The graph of this function family is decreasing over the entire domain.
5. The graph of this function family forms a V shape.
6. The graph of this function family has an increasing interval and a decreasing interval and forms a U shape.
7. The graph of this function family does not have an absolute maximum or absolute minimum and is a smooth curve.
8. The graph of this function family has an absolute maximum or absolute minimum and is made up of smooth lines.
9. The graph of this function family is made up of straight lines and does not have an absolute maximum or absolute minimum.
10. The graph of this function family decreases over the entire domain and is a smooth curve.

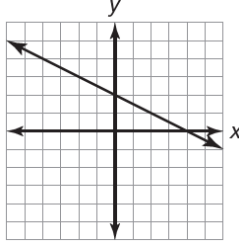
11. The function family whose graph is shown:



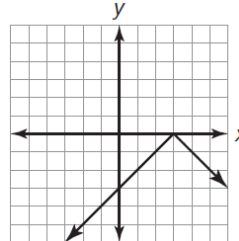
12. The function family whose graph is shown:



13. The function family whose graph is shown:



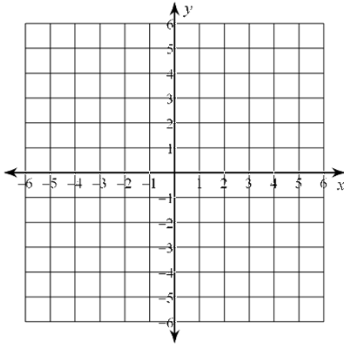
14. The function family whose graph is shown:



Create an equation and sketch a graph for a function with each set of given characteristics. Use values that are any real numbers between -6 and 6.

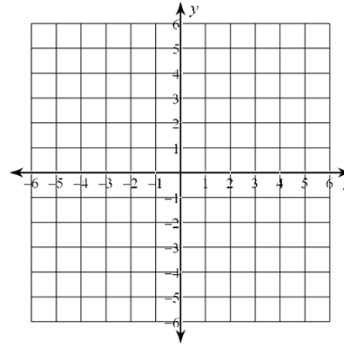
15. Create an equation and sketch a graph that:

- Is a smooth curve
- Is continuous
- Has a minimum
- Is quadratic



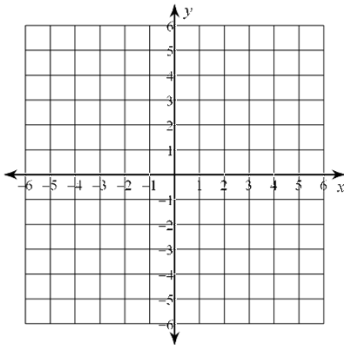
16. Create an equation and sketch a graph that:

- Is linear
- Is discrete
- Is decreasing across the entire domain



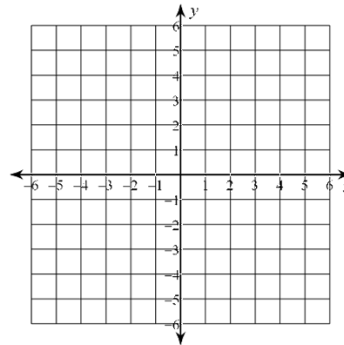
17. Create an equation and sketch a graph that:

- Is a smooth curve
- Is increasing across the entire domain
- Is continuous
- Is exponential



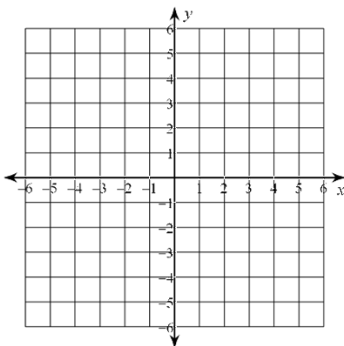
18. Create an equation and sketch a graph that:

- Has a maximum
- Is continuous
- Is a linear absolute value function



19. Create an equation and sketch a graph that:

- Is linear
- Is continuous
- Is neither increasing nor decreasing across the entire domain
- Does not pass through the origin



20. Create an equation and sketch a graph that:

- Is discrete
- Has a maximum
- Does not pass through the origin
- Is quadratic

