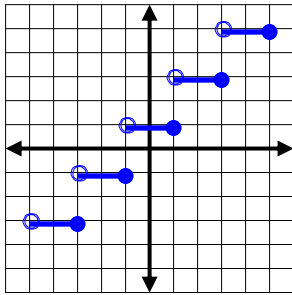


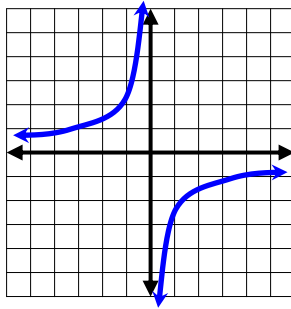
EXERCISE A

Identify the type of function represented by each graph.

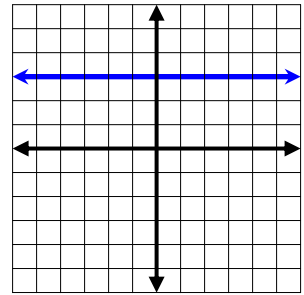
1)



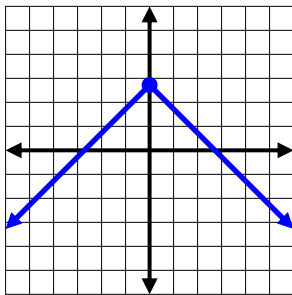
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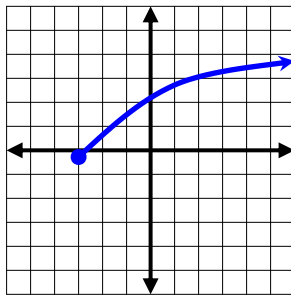
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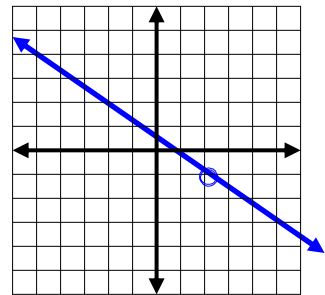
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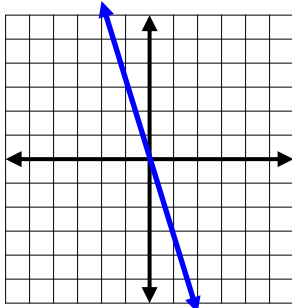
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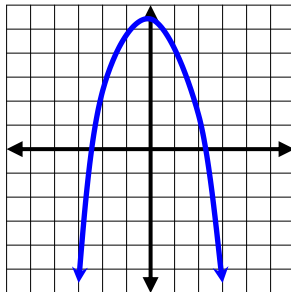
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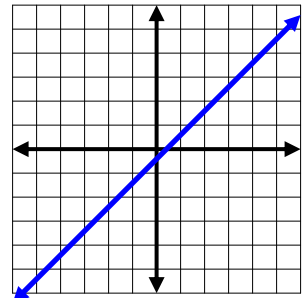
7)



8)



9)



Identify the type of function represented by each equation. Then graph the equation.

10) $y = x$

11) $y = -x^2 + 2$

12) $f(x) = |x + 2|$

13) $y = -1.5$

14) $y = 2.5x$

15) $f(x) = \sqrt{2x}$

16) $y = \frac{4}{x}$

17) $y = [3x]$

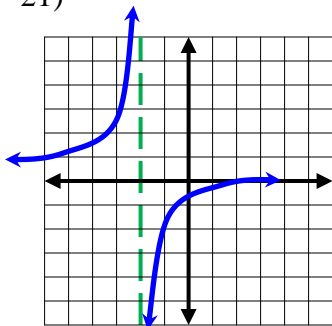
18) $f(x) = \frac{x^2 - 1}{x - 1}$

19) $y = |2x|$

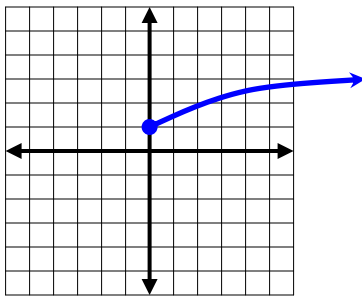
20) $f(x) = \begin{cases} -x + 5 & \text{if } x \geq 1 \\ 3x & \text{if } x < 1 \end{cases}$

Match each graph with an equation from the text box below.

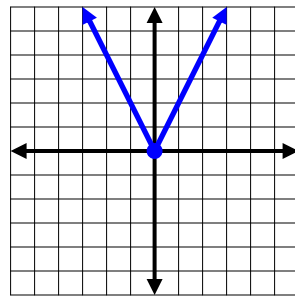
21)



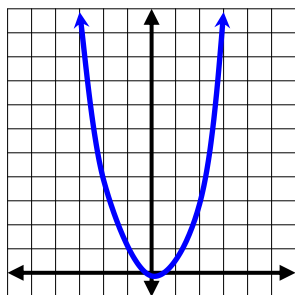
22)



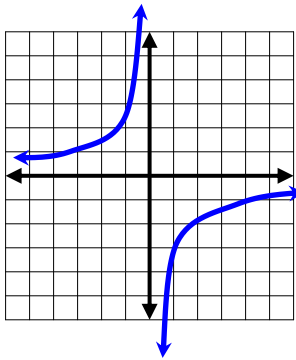
23)



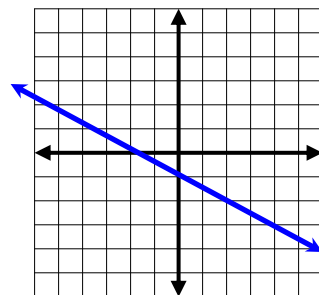
24)



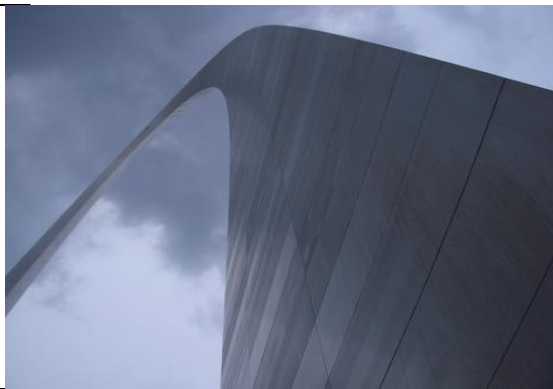
25)



26)



- | | |
|---------------------------|----------------------------|
| a) $y = \frac{1}{2}x - 1$ | f) $y = -\frac{3}{x}$ |
| b) $y = x^2 + 2x + 3$ | g) $y = \frac{x+1}{x+2}$ |
| c) $y = \sqrt{x} + 1$ | h) $y = 2\sqrt{x}$ |
| d) $y = 2 x $ | i) $y = -\frac{1}{2}x - 1$ |
| e) $y = 0.5x^2$ | j) $y = -2[x]$ |



EXERCISE B

27) The shape of the Gateway Arch of the Jefferson National Expansion Memorial in St. Louis, Missouri, resembles the graph of the function $f(x) = -0.00635x^2 + 4.0005x - 0.07875$, where x is in feet.

- Describe the shape of the Gateway Arch.
- Use a graphing calculator to determine its height.

28) Write the formula for the area of a circle. Identify the equation as a type of function. Describe the graph of the function.

ANSWERS

- | | | | |
|----------------------------|-----------------|----------------------|---------------------------|
| 1) greatest integer (step) | 9) identity | 17) greatest integer | 25) f |
| 3) constant | 11) quadratic | 19) absolute value | 27) parabola |
| 5) square root | 13) constant | 21) g | b) 630ft. |
| 7) direct variation | 15) square root | 23) d | See Mr. Paull for graphs. |