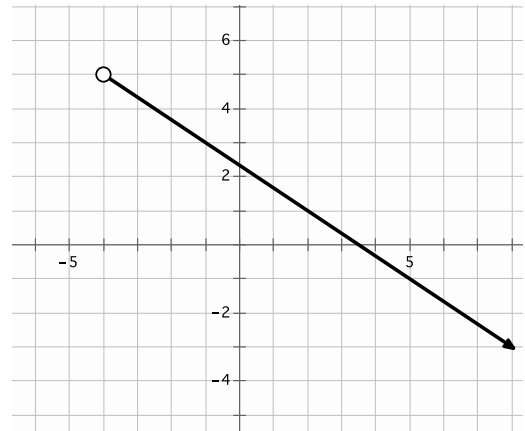


Use the graph to the right to answer the following questions.



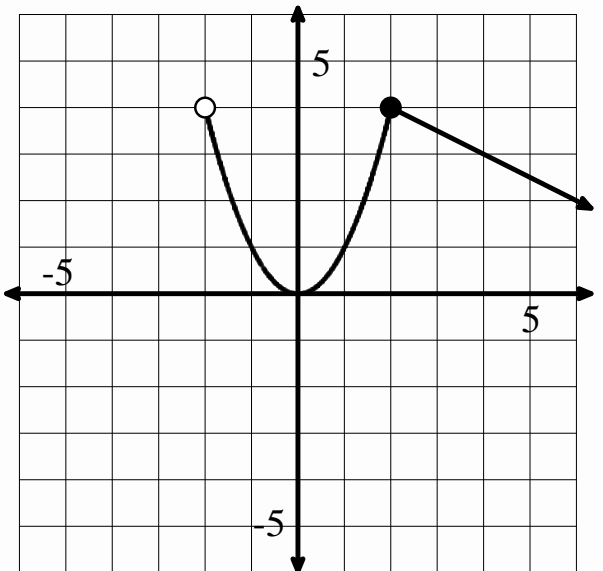
1. What is the domain of the function?
2. What is the range of the function?
3. Is there a defined minimum?
4. Is there a defined maximum?
5. Is the function increasing, decreasing, constant? Over what intervals?
6. Is the function continuous, discrete, or not continuous?
7. What are the x and y-intercepts?
8. Where is $f(x) \leq 0$?
9. Where is $f(x) > 1$?

10. $f(x) = 1, x = \underline{\hspace{2cm}}$

11. $f(5) = \underline{\hspace{2cm}}$

12. $f(x) = 5, x = \underline{\hspace{2cm}}$

Use the graph to the right to answer the following questions.

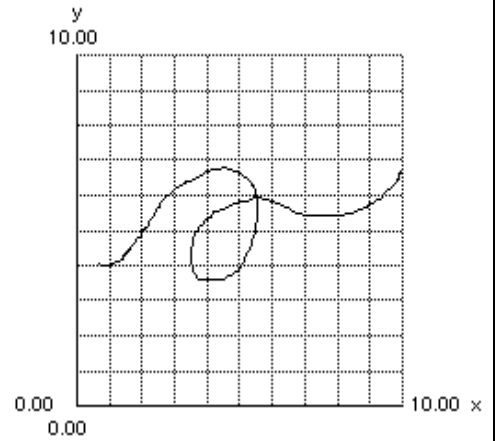
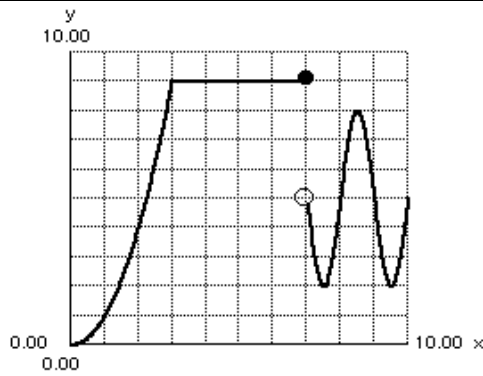
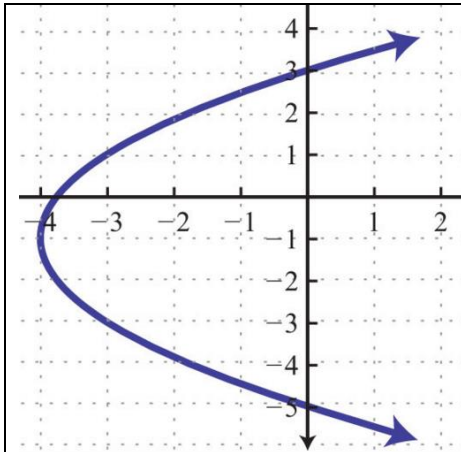


13. What is the domain?
14. What is the range?
15. Is there a defined minimum?
16. Is there a defined maximum?
17. Is the function increasing, decreasing, constant?
Over what intervals?

18. Which of the following is *not* a typical feature of a function?

- | | |
|---------------------------|-------------------------------------|
| a. Domain | b. Where the function is increasing |
| c. The scale of the graph | d. The maximum value |

19. Which of the following are functions?



| Time (s) | Height (m) |
|----------|------------|
| 0 | 7 |
| 2 | 10 |
| 4 | 5 |
| 6 | 0 |
| 7 | 0 |
| 8 | 3 |

| | | | | | | | |
|-----|---|----|---|---|----|----|----|
| x | 3 | 2 | 1 | 0 | 1 | 2 | 3 |
| y | 1 | -2 | 2 | 4 | -3 | -2 | -1 |

| x | y |
|-----|-----|
| 1 | 0 |
| 3 | 4 |
| 5 | 8 |
| 7 | 12 |
| 7 | 16 |

Use the discrete table to the right to answer the following questions.

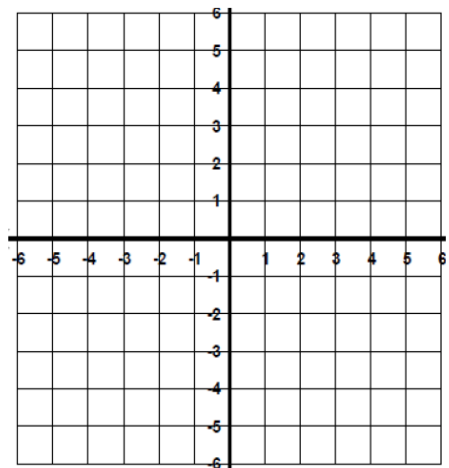
20. What is the domain?

21. What is the range?

| Time (s) | Height (m) |
|----------|------------|
| 0 | 7 |
| 2 | 10 |
| 4 | 5 |
| 6 | 0 |
| 7 | 0 |
| 8 | 3 |

Sketch a graph of a function with the following features.

- Domain of $[-4, 3]$
- Maximum of 6
- $f(1) = 2$



Describe all features of the functions below from the following:

Domain, range, minimum, maximum, increasing, decreasing.

Use interval notation when necessary. Try making a different representation of the equation if you are getting stuck.

$$f(x) = 4x - 2$$

| | | |
|----------------|-------------------|-------------------|
| <i>Domain</i> | <i>Range</i> | <i>Minimum</i> |
| <i>Maximum</i> | <i>Increasing</i> | <i>Decreasing</i> |

$$g(x) = 8(0.5)^x$$

| | | |
|----------------|-------------------|-------------------|
| <i>Domain</i> | <i>Range</i> | <i>Minimum</i> |
| <i>Maximum</i> | <i>Increasing</i> | <i>Decreasing</i> |

$$h(x) = 3x^2$$

| | | |
|----------------|-------------------|-------------------|
| <i>Domain</i> | <i>Range</i> | <i>Minimum</i> |
| <i>Maximum</i> | <i>Increasing</i> | <i>Decreasing</i> |

$$j(x) = -5$$

| | | |
|----------------|-------------------|-------------------|
| <i>Domain</i> | <i>Range</i> | <i>Minimum</i> |
| <i>Maximum</i> | <i>Increasing</i> | <i>Decreasing</i> |