

State whether the equation defines y as a function of x . You will be given equations for #1-8.

Use the following equation to answer #9 – 12.

$$f(x) = -3x^2 - 5x + 7$$

9. Find $f(-5)$.

10. Find $f(4x)$.

11. Find $f(x + 6)$.

12. Find $f(x + h)$.

State the domain of each function.

13. $f(x) = x^3 + 4$

14. $f(x) = \sqrt{x + 1}$

15. $f(x) = \frac{2}{x^2 - 5x}$

Find the difference quotient for the given function.

$$f(x) = \frac{f(x+h) - f(x)}{h}$$

16. $f(x) = 3x^2 - 2x + 5$