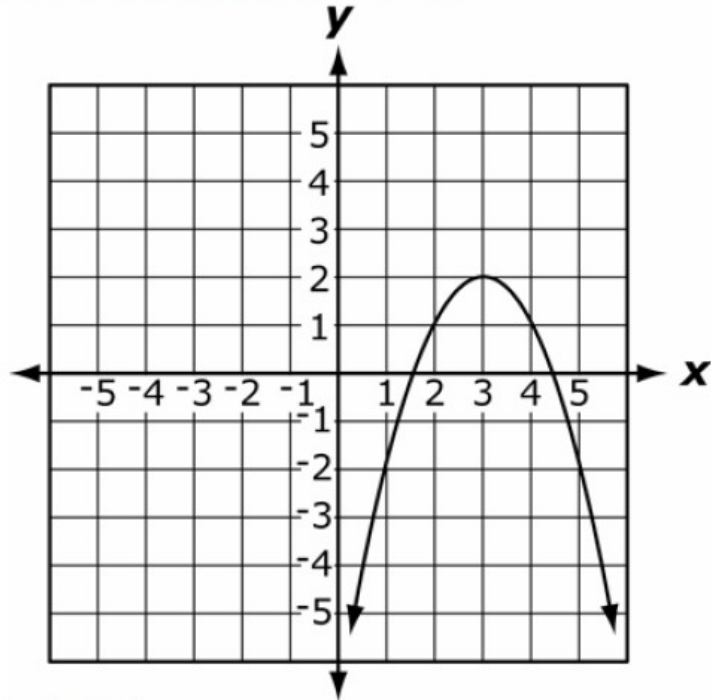


Algebra 2 Quick Quiz 11142022

Question 1.

What is the parent function of this graph?



- A $f(x) = x^2$
- B $f(x) = x^4$
- C $f(x) = -x^2$
- D $f(x) = -x^4$

Question 2

If $f(x) = 3x^2 - 2$ and $g(x) = 4x + 2$, what is the value of $(f + g)(-1)$?

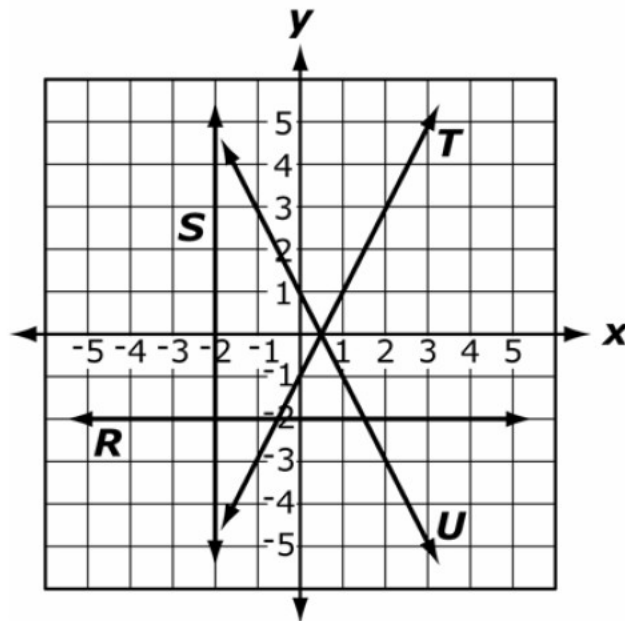
- A -7
- B -1
- C 1
- D 7

Question 3.

If $f(x) = x^2 - 1$ and $g(x) = x - 1$, what is the value of $\left(\frac{f}{g}\right)(x)$?

- A $x - 1$
- B $x + 1$
- C $\frac{1}{x - 1}$
- D $\frac{1}{x + 1}$

Question 4.



If $f(x) = x - \frac{1}{2}$ and $g(x) = -2$, which graph corresponds to the function of $(fg)(x)$?

- A line R
- B line S
- C line T
- D line U

Question 5.

If $f(x) = 2x + 7$ and $g(x) = 3x^2 - 1$, what expression represents $(f(g(x)))$?

- A $6x^2 + 5$
- B $6x^2 + 12$
- C $3x^2 - 2x - 8$
- D $3x^2 + 2x + 6$

Question 6.

If $(f \circ g)(x) = 2x - 1$, how might $f(x)$ and $g(x)$ be defined?

- A $f(x) = (x - 1)$ and $g(x) = (2x - 1)$
- B $f(x) = (x - 1)$ and $g(x) = (2x + 1)$
- C $f(x) = (2x - 1)$ and $g(x) = (x - 1)$
- D $f(x) = (2x + 1)$ and $g(x) = (x - 1)$

Question 7.

Which statement is true for the function $f(x) = \frac{1}{x+4}$?

- A 4 is not in the range of the function.
- B 4 is not in the domain of the function.
- C -4 is not in the range of the function.
- D -4 is not in the domain of the function.

Question 8.

What is the domain of the function $f(x) = \frac{x+5}{x^2+2x-8}$?

- A $\{x : x \neq 0\}$
- B $\{x : x \neq -5\}$
- C $\{x : x \neq -2, 4\}$
- D $\{x : x \neq 2, -4\}$

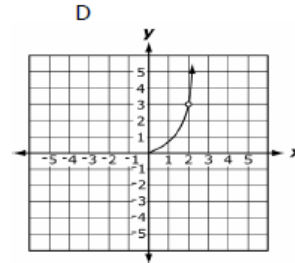
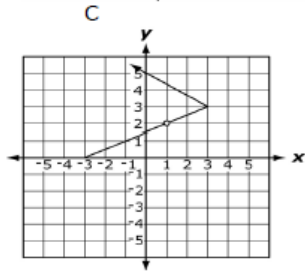
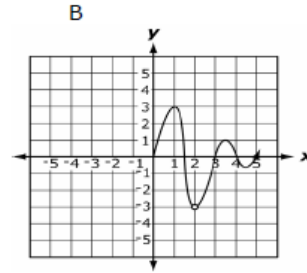
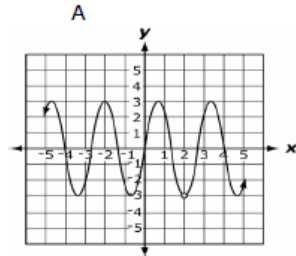
Question 9.

Which intervals correctly define the domain of $f(x) = \frac{1}{x+4} - 2$?

- A $(-\infty, 4)$ and $(4, \infty)$
- B $(-\infty, -4)$ and $(4, \infty)$
- C $(-\infty, -4)$ and $(-4, \infty)$
- D $(-\infty, -4)$ and $(-2, \infty)$

Question 10.

Domain: $\{x|x \geq 0, x \neq 2\}$ Range: $\{y|-3 < y \leq 3\}$ Which graph corresponds to the given constraints?



Bonus Question

Question 11 a

Solve the equation $27^x = 9^{x-3}$ for x .

Question 11 b

The functions f and g are defined by $f(x) = x^2$ and $g(x) = 2x$, respectively.

Which equation is equivalent to $h(x) = \frac{f(2x)g(-2x)}{2}$?

- A. $h(x) = -2x^3$
- B. $h(x) = -8x^3$
- C. $h(x) = x^2 - 2x$
- D. $h(x) = 2x^2 + 2x$