

D) Flip
 M) Squish
 1) Factor everything
 2) Excluded values
 3) Cancel chunks

EXCLUDED VALUES

Common Denominators
 Cross Multiply

Rationals & Radicals

$\sqrt[n]{x^a} = x^{\frac{a}{n}}$

1) Get the radical by itself
 2) Square both sides
 3) Solve for x
 4) Check your answers!

+

2

Which describes the first and second steps in solving the equation $\sqrt{x-5} = 10$?

A Square each side, and then add 5 to each side.
 B Square each side, and then subtract 5 from each side.
 C Add 5 to each side, and then square each side.
 D Subtract 5 from each side, and then square each side.

So x equals _____

1

No Calculator Problem!!!

What is the value of $\frac{x^2 - 8x + 16}{x^2 - 16}$ when $x = -4$?

A 0
 B 1
 C -8
 D undefined

3

A circuit has a resultant resistance of $\frac{6x}{6+x}$ when two resistances are combined. A student wants to calculate the resistance (x) needed for the resultant resistance and needs to solve the equation $2 = \frac{6x}{6+x}$ where $x \neq 6$. The steps shown appear in the calculation.

Using the numerals 1-4, put the steps in the order in which they should be performed to solve for x.

Divide both sides of equation by 4.
 Distribute the term $2(6+x)$.
 Multiply both sides of equation by $(6+x)$.
 Subtract $2x$ from both sides of the equation.

What is value of x?

4

In 1980, James planted a tree that was 1 foot tall. In 1996, that same tree was 71 feet tall. James finds that the height of the tree can be modeled by the radical function $H(t) = \sqrt{k}t + 1$, where $H(t)$ is the height of the tree in feet, t is the number of years since 1980, and k is a specific constant.

What is the value of k ?

5

What value(s) of x makes the equation $\frac{3}{x+3} = \frac{9}{x^2-9}$ true? Enter your answer(s) in the space provided. If there is only one answer, leave the other space blank.

6

Which of the following are equivalent to $x^{\frac{5}{4}}$?

No Calculator Problem!!!

- A $\sqrt[5]{x^4}$
- B $\sqrt[4]{x^5}$
- C $(\sqrt[5]{x})^4$
- D $\frac{\sqrt[4]{x}}{5}$
- E $\sqrt{x^5}$

7

Consider the rational functions $f(x)$ and $g(x)$.

$$f(x) = \frac{x^2 + 3x}{x^2 + x - 6} \quad g(x) = \frac{x + 2}{x^2 - 9}$$

Complete the table by placing a check mark in the box if the x -value is part of the domain of the function.

	-3	-2	0	2	3
$f(x)$					
$g(x)$					