

Index Equations Card Sort

Match each equation with its solution and intermediate equation.

Solve $2^{x+2} = 4^x$

Solve $8^{2-x} = 8^4$

$$x = -2$$

$$x + 2 = 2x$$

$$2 - x = 4$$

$$x = \frac{2}{3}$$

$$x = 2$$

$$x^2 + x - 2 = 0$$

$$x - 1 = -3$$

Solve $3^{3x+1} = 27$

Solve $5^{x-1} = \frac{1}{125}$

Solve $4^{x^2+x} = 16$

$$3x + 1 = 3$$

$$x = 2 \text{ and } x = -1$$

$$x = \frac{1}{2} \text{ and } x = -3$$

$$7^{2x^2+5x} = 343$$

$$x - 3 = \frac{1}{3}$$

$$x = -2$$

$$2x^2 + 5x - 3 = 0$$

$$\text{Solve } 3^{4x-5} = 81$$

$$4x - 5 = 4$$

$$x = \frac{10}{3}$$

$$\text{Solve } 6^{x-3} = \sqrt[3]{6}$$

$$x = \frac{9}{4}$$

$$3x^2 - 5x - 2 = 0$$

$$x = \frac{5}{3}$$

$$\text{Solve } 6^{3x} = 7776$$

$$x = -\frac{1}{3} \text{ and } x = 2$$

$$3x = 5$$

$$\text{Solve } 2^{3x^2-2} = 32^x$$