

POWER FUNCTIONS CIRCUIT

Begin by completing the problem in cell #1. Search for your answer in the remaining cells. Put #2 in the problem blank: # _____. Work that question and proceed in this manner until you complete the circuit.

<p>Answer: $4x^2$</p> <p># 1 Write the power function in the form kx^a.</p> $f(x) = \frac{-2x^{-1}}{-x^{-3}}$	<p>Answer: $3x^{1/2}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = -5x^{10}(-2x^2)^4$
<p>Answer: $27x^{-15}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = 4x^4\sqrt{x^7}$	<p>Answer: x^{-11}</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{-2x^2 \cdot 3x^4}{-3x^{-4}}$
<p>Answer: $-\frac{1}{2}x^{-1}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{8x^4}{(-x^2)^4 \cdot (-x^{-1})^5}$	<p>Answer: $9x^{24}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{6x^{10} \cdot (-x)^7}{(x^9)^2}$
<p>Answer: $-5x^{-4}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \sqrt{16x} \cdot 4x^2 \cdot x^{-1}$	<p>Answer: $2x^2$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{2x^2}{5x^4}$
<p>Answer: 45</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \left(\frac{x^3}{-2x^4}\right)^2$	<p>Answer: 160</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \sqrt[3]{64x^6}$
<p>Answer: -10</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{2x^2}{\sqrt{16x}}$	<p>Answer: 90</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{3x}{\sqrt{x}}$

<p>Answer: $9x^6$</p> <p># _____ If y varies jointly as z and the square root of x; $y = 15$ when $z = 2$ & $x = 4$. Find y when $z = 4$ & $x = 9$.</p>	<p>Answer: $\frac{1}{2}x^{3/5}$</p> <p># _____ If x varies directly as y and inversely as the cube of z; $x = 10$ when $y = 4$ & $z = 12$. Find x when $y = 8$ & $z = 6$.</p>
<p>Answer: $-6x^{-1}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \left(\frac{x^2 \cdot 3x}{(x^2)^4}\right)^3$	<p>Answer: $2x^{10}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{x \cdot 2x}{-4x^3}$
<p>Answer: $\frac{2}{5}x^{-2}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = (x^3)^{-3} \cdot (2x^3)^4$	<p>Answer: $-8x$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{5x^2 \cdot x^{-3}}{-x^3}$
<p>Answer: $4x^{11/4}$</p> <p># _____ Given that y varies inversely as x; $y = 5$ when $x = 4$. Find x when $y = -2$.</p>	<p>Answer: $16x^{3/2}$</p> <p># _____ If y varies jointly as z and the square of x; $y = 15$ when $z = 4$ & $x = 2$. Find y when $z = 6$ & $x = 4$.</p>
<p>Answer: $16x^3$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = (-3x^4)^2 \cdot x^{-2}$	<p>Answer: $\frac{1}{2}x^{3/2}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \sqrt[5]{\frac{x^3}{32}}$
<p>Answer: $-80x^{18}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = (-3x^2 \cdot x^{10})^2$	<p>Answer: $\frac{1}{4}x^{-2}$</p> <p># _____ Write the power function in the form kx^a.</p> $f(x) = \frac{(x^4)^{-2}}{x^3}$