무리방정식 풀이의 기본원리
(Basic Principle of Solving Irrational Equations)

Basic Principle of Solving Irrational Equations

▸ Start ▸ End

Start End

$$f = g$$

Start End

$$\begin{array}{ccc} f & = & g \\ & \Downarrow & \\ f^2 & = & g^2 \end{array}$$

Start End

$$\begin{array}{rcl} f & = & g \\ & \Downarrow & \\ f^2 & = & g^2 \\ & \Updownarrow & \\ f^2 - g^2 & = & 0 \end{array}$$

Start End

$$
\begin{array}{rcl}
f & = & g \\
 & \Downarrow & \\
f^2 & = & g^2 \\
 & \Updownarrow & \\
f^2 - g^2 & = & 0 \\
 & \Updownarrow & \\
(f+g)(f-g) & = & 0
\end{array}
$$

Start End

$$
\begin{array}{rcl}
f & = & g \\
 & \Downarrow & \\
f^2 & = & g^2 \\
 & \Updownarrow & \\
f^2 - g^2 & = & 0 \\
 & \Updownarrow & \\
(f+g)(f-g) & = & 0 \\
 & \Updownarrow & \\
f = -g & or & f = g
\end{array}
$$

Start End

$$
\begin{array}{rcl}
f & = & g \\
& \Downarrow & \\
f^2 & = & g^2 \\
& \Updownarrow & \\
f^2 - g^2 & = & 0 \\
& \Updownarrow & \\
(f+g)(f-g) & = & 0 \\
& \Updownarrow & \\
f = -g & or & f = g
\end{array}
$$

$$\therefore f = g$$

Start End

$$
\begin{aligned}
f &= g \\
&\Downarrow \\
f^2 &= g^2 \\
&\Updownarrow \\
f^2 - g^2 &= 0 \\
&\Updownarrow \\
(f+g)(f-g) &= 0 \\
&\Updownarrow \\
f = -g \quad &or \quad f = g
\end{aligned}
$$

$$
\therefore f = g \quad \Rightarrow
$$

Start End

$$
\begin{array}{rcl}
f & = & g \\
 & \Downarrow & \\
f^2 & = & g^2 \\
 & \Updownarrow & \\
f^2 - g^2 & = & 0 \\
 & \Updownarrow & \\
(f+g)(f-g) & = & 0 \\
 & \Updownarrow & \\
f = -g & or & f = g
\end{array}
$$

$$
\therefore f = g \quad \Rightarrow \quad f^2 = g^2
$$

Start End

$$
\begin{array}{rcl}
f & = & g \\
 & \Downarrow & \\
f^2 & = & g^2 \\
 & \Updownarrow & \\
f^2 - g^2 & = & 0 \\
 & \Updownarrow & \\
(f+g)(f-g) & = & 0 \\
 & \Updownarrow & \\
f = -g & or & f = g
\end{array}
$$

$$
\therefore f = g \quad \Rightarrow \quad f^2 = g^2
$$

Github:
https://min7014.github.io/math20210216001.html

Click or paste URL into the URL search bar,
and you can see a picture moving.