

- Let $h(x) = (x^2 + 1)^5$. Find two functions f and g so that $h(x) = (f \circ g)(x)$.

THERE ARE ALWAYS LOTS OF WAYS TO DO THIS KIND OF PROBLEM, BUT ONE CHOICE WILL USUALLY "jump" OUT AT YOU.

$h(x) = (x^2 + 1)^5$ IS THE " $x^2 + 1$ " FUNCTION PLUGGED INTO THE 5TH POWER FUNCTION.

So, LET $f(x) = x^5$
AND $g(x) = x^2 + 1$.

THE $f(g(x)) = f(x^2 + 1)$
 $= (x^2 + 1)^5$.

THAT WAS PROBABLY

THE BEST CHOICE, BUT HERE ARE SOME OTHERS. CHECK THEM OUT.

$$f(x) = (x-1)^5$$

$$g(x) = x^2 + 2$$

$$f(x) = x^a$$

$$g(x) = (x^2 + 1)^{5/a}$$

$$f(x) = (x+1)^5$$

$$g(x) = x^2$$