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ALGEBRA 2 · 5 MINUTES · START RIGHT AWAY

Lesson 5-6e **Use Composition to Verify Inverse Functions**

Name _____ Date _____ Per _____

1 FLUENCY

$f(x) = 4x - 7$ and $g(x) = \frac{x+7}{4}$. Find $f(g(x))$. Are they inverses?

$f(g(x)) =$ ☐ Inverses? **Yes** or **No**

2 VISUAL MODEL

Send each input through f and then g. Fill in the outputs.

$f(x) = x^3 + 2$ $g(x) = \sqrt[3]{(x-2)}$

2 → ☐ → ☐

−1 → ☐ → ☐

Each output equals the input, so $g =$ **f^{-1}** or **f**

3 APPLICATION

Dollars to euros: $E(d) = 0.92d$. Euros to dollars: $D(e) = \frac{e}{0.92}$. Find $E(50)$, then $D(E(50))$. What does this show?

$E(50) =$ € ☐ $D(E(50)) =$ $ ☐

Shows: _____

WORK

4 REASONING

$f(x) = x^2$ and $g(x) = \sqrt{x}$. Find $g(f(-3))$. Are f and g inverses for all real numbers?

$g(f(-3)) =$ ☐ **Yes** or **No**

_____

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

PREVIEW PREVIEW PREVIEW

Preview - the full worksheet and its answer key are at primeworksheet.com