Mr. Doherty
Algebra 2

Name: _____

5) Circle the function below that is the correct inverse of $f(x) = 8x + 24$

a) $f^{-1}(x) = \frac{x+24}{8}$

b) $f^{-1}(x) = \frac{x-24}{8}$

$y = 8x + 24$
$-24 \quad -24$

$\frac{x-24}{8} = \frac{8x}{8}$

c) $f^{-1}(x) = \frac{x-8}{24}$

d) $f^{-1}(x) = \frac{x}{8} + 3$

$\frac{x-24}{8} = f^{-1}(x)$

6) A clothing store is having a storewide sale of 30% off on every item. The sale price S of an item that has a regular price of R is given by the following function: $S = R - 0.3R$

a) Find the inverse of this function.

$\frac{S}{.7} = \frac{.7R}{.7}$ $\quad R = \frac{S}{.7}$

b) If a pair of pants has a sale price of $33.60, what is the regular price of the pants?

$R = \frac{33.60}{.7}$ $\quad R = \$48$

7) What does the composition of a function and its inverse simplify to?

X

8) For the following functions decide if the inverse is a function.

$f(x) = 2x$ Yes

$g(x) = |x+1| - 3$ No

$h(x) = x^2$ No

$j(x) = 4x^3$ Yes