Name _____ Date _____

Composition of Functions - Guided Lesson Explanation

Explanation # 1

Plug m – 4 into f(c) and simplify.

f(c) = 2c

f (m – 4) = 2 (m – 4)

f (m – 4) = 2m – 8.

So, the answer is f (m – 4) = 2m – 8.

Explanation # 2

Step 1) First we have to be find out what is being asked. We will need to evaluate the functions separately and then evaluate them as a set.

Step 2) Evaluate the inner function.

$t(4) = 7x - 2$

$t(4) = 7 \times 4 - 2$

$t(4) = 28 - 2$

$t(4) = 26$

Step 3) Insert the answer from step 2 into outer function and evaluate further.

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

$v(26) = 26^2 + 2$

$v(26) = 676 + 2$

$v(26) = 678$

So, the answer is t(4) = 26 and v(26) = 678.

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Explanation # 3

Step 1) Evaluate the inner function.

$t(5) = 7x - 2$

$t(5) = 7 \times 5 - 2$

$t(5) = 35 - 2$

$t(5) = 33$

Step 2) Insert the answer from step 2 into outer function and evaluate further.

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

$v(33) = 33^2 + 2$

$v(33) = 1089 + 2$

$v(33) = 1091$

So, the answer is $t(5) = 33$ and $v(33) = 1091$.