

Sec 9.5 Composition of Functions

Composition of Functions is used to show the relationship between 2 functions that are related.

Usually used to represent a situation where the answer to one function is used to solve a second function.

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Notation

$f(x)$

$g(x)$

$f(g(x))$ or $f \circ g$ or f of g

said "f of g"

The answer to $g(x)$ is put into $f(x)$

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Ex:

$$\text{Given } f(x) = 2x - 5$$

$$g(x) = 3x^2$$

1/ Find $f(g(2))$

2/ Find $f(g(x))$

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Can also find $g(f(x))$ or $g \circ f$

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Read Ex 3 page 549 for domain issues

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You can also use this unit with word problems...

Ex 1: Stopping distance is a function of reaction time and braking distance.

$$S(t) = R(t) + B(t)$$

Ex 2: Profit per item, x , is a function of income made from each item minus the cost to produce each item.

$$P(x) = I(x) - C(x)$$

Ex 3: The cost of renting a banquet hall is based on flat fee of \$350 and \$25 cost per person,

$$C(p) = 25p + 350.$$

In April the hall has a sale of 20% off.

$$\text{Sale price } S(p) = 0.8C(p)$$

Jun 12-11:40 AM

Homework

p552 #

1ace,3ac,4,6ade,7ace

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