Warm Up

Try These!!!

Quiz tomorrow

Domain/Range

Linear/Non-Linear

Continuous/Discrete

Function notation

#1. If $f(x) = -4x^2 - x + 10$

a) $f(-2)$

b) $f(3)$

$\{x \mid \_ \leq x \leq \_, x \in -3\}$

a) $f(x) = -4x^2 - x + 10$

$f(-2) = -4(-2)^2 - (-2) + 10$

$= -4 \times 4 + 12 + 10$

$= -16 + 2 + 10$

$\boxed{f(-2) = -4}$

b) $f(x) = -4x^2 - x + 10$

$f(3) = -4(3)^2 - (3) + 10$

$= -4 \times 9 - 3 + 10$

$= -36 - 3 + 10$

$= -39 + 10$

$\boxed{f(3) = -29}$

Worksheet   From LAST Thursday

Solutions

1 a) -29   b) 16   c) -6   d) 23   e) $29 + \dfrac{12}{a}$

f) x= -5   g) x = -6   h) x= ±4   i) 10   j) $-3\left(\dfrac{12}{x}\right) + 1$

$$= \dfrac{-36}{x} + 1$$
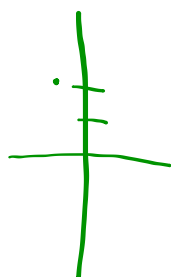
$$f(\overset{x}{-1}) = \overset{y}{1}$$

2)a) $(\overset{x,y}{-1, 1})$ b) (2,7)   c) (1,-1)   d) (3,9)

3) a) f(-4) = 2   b)   f(0) = 0   c) f(3) = 1.75   d)   f(-5) = 0

x=-4   y=2

e) x = -4 and x= -1 when f(x)= 2   f) f(x) = 0 when x =-5 and x= 0

$f(x) = -2x + 3$ $g(x) = 3x^2 + 4$

$h(x) = 5(x-1)$

$5x - 5$

a)   f(2)

$f(x) = -2x + 3$

$f(2) = -2(2) + 3$

$= -4 + 3$

$f(2) = -1$

b) f(x) = 31

$f(x) = -2x + 3$

$31 = -2x + 3$

Rearrange and solve for x

$31 - 3 = -2x + 3 - 3$

$28 = -2x$

$\dfrac{28}{-2} = \dfrac{-2x}{-2}$

$-14 = x$

$f(x) = -2x + 3$ $g(x) = 3x^2 + 4$

$h(x) = 5(x-1)$

c) $g(f(5))$

do first

$f(x) = -2x + 3$

$f(5) = -2(5) + 3$

$= -10 + 3$

$\boxed{f(5) = -7}$

put answer of f(5) in

$g(-7)$

$g(x) = 3x^2 + 4$

$g(-7) = 3(-7)^2 + 4$

$= 3(49) + 4$

$= 147 + 4$

$\boxed{g(f(5)) = 151}$

$$f(x) = -2x + 3 \qquad g(x) = 3x^2 + 4$$

$$h(x) = 5(x-1)$$

d) **h(8) -f(1)**

$h(x) = 5(x-1)$

$h(8) = 5(8-1)$

$\quad = 5(7)$

$h(8) = 35$

$f(x) = -2x+3$

$f(1) = -2(1)+3$

$\quad = -2 + 3$

$f(1) = 1$

$h(8) - f(1)$

$35 - 1$

final

34

e) **g(x) = 80**

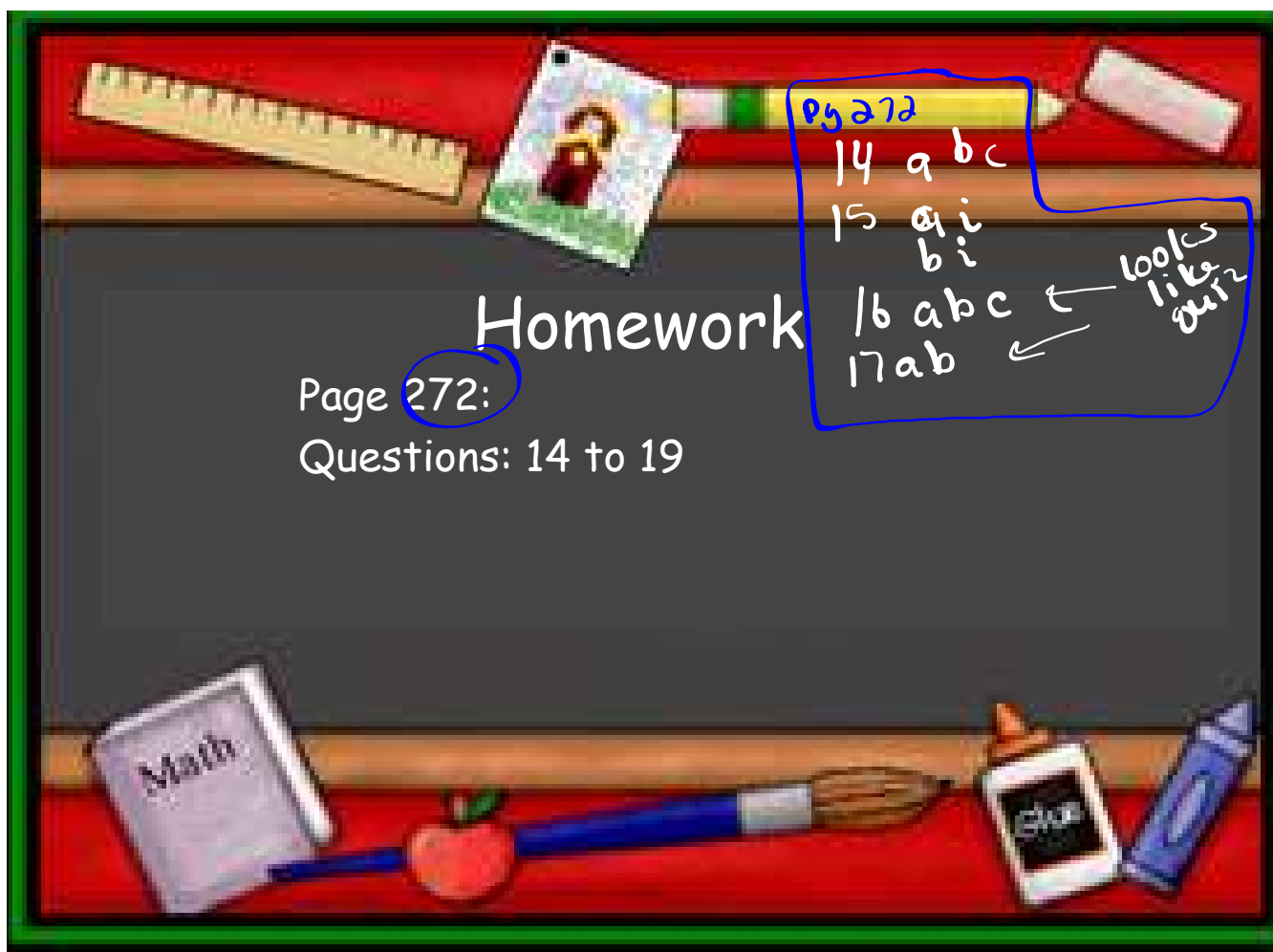$g(x) = 3x^2 + 4$

$80 = 3x^2 + 4$

$80 - 4 = 3x^2 + 4 - 4$

$76 = 3x^2$

$\dfrac{76}{3} = \dfrac{3x^2}{3}$

$25.3 = x^2$

$\sqrt{25.3} = \sqrt{x^2}$

$5.1 \approx x$

Homework

Page 272:

Questions: 14 to 19

Pg 272

14 a b c

15 a i
   b i

16 a b c ← looks like quiz

17 a b ←

Attachments

FunctionNotationWorksheet.pdf