MATH-6103-2013T(UGRD) Calculus 2

PRELIM QUIZ NO.1

If $F(y)=y(y-3)^2$If F(y)=y(y−3)2, find F(c) and F(3)

Select one:

a.
F(c) = 3c(c-3)^2

F(3) = 3(3 - 3)^2 = 0

b.
F(c) = c(c-3)^2

F(3) = 3(3c - 3)^2 = 0

c. F(c) = c(c-3)^2
F(3) = 3(3 - 3)^2 = 0

If $F(y)=y(y-3)^2$F(y)=y(y−3)2, find F(x + 3)

Select one:

a. $x^2(-x+3)$x2(−x+3)

b. $x^2(x+3)$x2(x+3)

c. $x^2(-x-3)$x2(−x−3)

d. $x^2(x-3)$x2(x−3)

Given $f(x)=3x-2$ and $g(x)=\frac{1}{3}x+2$,f(x)=3x−2 and g(x)=13x+23, find (g . f)(x)

Select one:

a. -x

b. x

c. 0

d. No correct answer

If $f(x)=8x^3-3x^2, g(x)=4x^3+9x^2$ and $h(x)=3x^2$f(x)=8x3 −3x2,g(x)=4x3+9x2 and h(x)=3x2. Find (f + g/h)(x)

Select one:

- a. 4x - 2
- b. 4x + 2
- c. -4x + 2
- d. -4x - 2

If $f(x)=7-2x+x^2$If f(x)=7−2x+x2, find f(0) ad f(-2)

1. f(0) = Answer: 7

2 f(-2) = Answer: 15 **correct**

If $f(x)=5x^2-2x-5, g(x)=7x+8$, and $h(x)=4x^2-10$f(x)=5x2−2x−5,g(x)=7x+8, and h(x)=4x2−10. Find (f - h)(x)

Select one:

- a. $-x^2+2x-5$−x2+2x−5
- b. x^2+2x-5x2+2x−5
- c. x^2+2x+5x2+2x+5
- d. $-x^2+2x+5$

If $g(x)=4x^2-3x^2+2x-2$If g(x)=4x2−3x2+2x−2, find g(2) and ($12$12)

1. g(2) = Answer: 6 **wrong**

2. g(1/2) = Answer: -3/4 **wrong**

If $F(b)=(b-b^2)(1+b^2)$F(b)=(b−b2)(1+b2), find F(12)12)

Note: Answer should be in decimal form.

Aswer:0.2

Find the inverse of $f(x)=\frac{x+4}{3x-2}$f(x)=x+43x−2

Select one:

a. $f^{-1}(x)=\frac{4-2x}{3x+1}$f−1(x)=4−2x3x+1**wrong**

b. $f^{-1}(x)=\frac{4-2x}{3x-1}$f−1(x)=4−2x3x−1

c. $f^{-1}(x)=\frac{4+2x}{3x-1}$f−1(x)=4+2x3x−1

d. $f^{-1}(x)=\frac{4+2}{3x+1}$f−1(x)=4+2x3x+1

Find the inverse of $h(x)=\frac{3}{2}x+1$h(x)=32x+1

Select one:

a. (3 + \frac {x}{2}x \)

b. (-3 - \frac {x}{2}x \)

c. (-3 + \frac {x}{2}x \)

d. (3 - \frac {x}{2}x \)

PRELIM QUIZ NO.1 SECOND ATTEMPT 10/10

Given $f(x)=3x^2-x+10$f(x)=3x2−x+10 and g(x) = 1 - 20x, find (f . g)(x)

Select one:

a. $1200x^2-100x+12$1200x2−100x+12

b. $-1200x^2-100x+12$−1200x2−100x+12

c. $-1200x^2-100x-12$-1200x2−100x−12

d. $1200x^2-100x-12$

If $F(b)=(b-b^2)(1+b^2)$If F(b)=(b−b2)(1+b2), find F(0) and F ($\frac{1}{2}\frac{1}{2}$)
Note: Write your answer in decimal form.

1. F(0) = Answer [ ] 0

2. F(1/2) = Answer [ ] 0.2

If $f(x)=5x^2+2x-5, g(x)=7x+8$, and $h(x)=4x^2-10$If f(x)=5x2+2x−5,g(x)=7x+8, and h(x)=4x2−10. Find (f - h)(x)

Select one:

a. $(f-h)(x)=x^2+2x+5$(f−h)(x)=x2+2x+5

b. $(f-h)(x)=x^2-2x+5$(f−h)(x)=x2−2x+5

c. $(f-h)(x)=-x^2-2x-5$(f−h)(x)=−x2−2x−5

d. $(f-h)(x)=x^2-2x-5$

Add the functions f(x) = x + 2 and g(x) = 5x - 6

Select one:

a. f(x) + g(x) = 6x - 4

b. f(x) + g(x) = -6x + 4

c. f(x) + g(x) = 6x + 4

d. f(x) + g(x) = -6x - 4

$f(x)=5x+6, g(x)=3x^2-4x+8$f(x)=5x+6,g(x)=3x2−4x+8. Find (f - g)(x)

Select one:

a. $(f-g)(x)=3x^2+9x+2$(f−g)(x)=3x2+9x+2

- b. $(f-g)(x)=-3x^2-9x+2$ (f−g)(x)=−3x2−9x+2
- c. $(f-g)(x)=3x^2-9x+2$ (f−g)(x)=3x2−9x+2
- d. $(f-g)(x)=3x^2-9x-2$

Given f(x) = 3x - 2 and g(x) = $\frac{1}{3}x+\frac{2}{3}$ 13x+23 find (f . g)(x)

Select one:

- a. 2
- b. x + 2
- c. -2
- d. x

If $f(x)=12x^3+15x^2-6x$ and $g(x)=3x$ If f(x)=12x3+15x2−6x and g(x)=3x. Find (f/g)(x)

Select one:

- a. $(fg)(x)=4x^2-5x-2$ (fg)(x)=4x2−5x−2
- b. No correct answer
- c. (\ (\frac {f}{g})(x) = 4x^2 + 5x - 2 \)
- d. $(fg)(x)=-4x^2-5x+2$

Given $f(x)=3x^2-x+10$ f(x)=3x2−x+10 and g(x) = 1 - 20x, find (g . f)(x)

Select one:

- a. $60x^2-20x-199$ 60x2−20x−199

b. $-60x^2-20x-199$

c. $60x^2+20x+199$

d. $60x^2+20x-199$

Find the inverse of $f(x)=\frac{x+4}{3x-2}$

Select one:

a. $\frac{4+2x}{3x+1}$

b. $\frac{4-2x}{3x+1}$

c. $\frac{4-2x}{3x-1}$

d. $\frac{4+2x}{3x-1}$

Find the inverse of $h(x)=\frac{3}{2}x+1$

Select one:

a. $h^{-1}(x)=\frac{3-x}{2x}$

b. $h^{-1}(x)=\frac{2-x}{3x}$

c. $h^{-1}(x)=\frac{3-x}{2x}$

d. $h^{-1}(x)=\frac{2}{3-x}$

PRELIM QUIZ NO.2 4/10

If $f(x)=7-2x+x^2$, find f (0) and f(-2)
(Note: Decimal form only. Round your answer to a single decimal place)

$f(0)$ =Answer 7

$f(-2)$ =Answer 15

Solve the equations $\cos\theta - \sin\theta = 1$ for $0 \le \theta < 2\pi$ $\cos\theta - \sin\theta = 1$ for $0 \le \theta < 2\pi$

Fill in the missing numbers to find the correct answer/s:

1.) \(\theta \) Answer

2.) \(\theta = \) Answer ππ /Answer

If $\log_b x = 2.3$ and $\log_b y = 3.1$, find $\log_b \frac{b^5 x^2}{y^3}$.

(Note: Answer will be in decimal form ONLY. Round to 1 decimal place)

Answer:

Let $f(x) = \begin{cases} x^2 + 1, & \text{if } x < -1 \\ \sqrt{x+1}, & \text{if } x \ge -1 \end{cases}$

Compute the following limits or state that they do not exist.

Note: If it does not exist, type 0.0001 on the space provided.

1.) $\lim_{x \to 1+} f(x)$ $\lim x \to 1+ f(x)$=Answer

2.) $\lim_{x \to -1} f(x)$ $\lim x \to -1 f(x)$=Answer

Solve the equation $\sin\theta = 3 - \sqrt{\cos\theta}$ for $0 \le \theta < 2\pi$ $\sin\theta = 3\cos\theta$ for $0 \le \theta < 2\pi$

Fill in the missing numbers to find the correct answer/s:

1.) $\theta=\pi\theta=\pi$ /Answer

2.) $\theta=\theta=$Answer $\pi\pi$ / Answer

Solve the equation $\cos\theta-\sin\theta=1$ for $0\leq\theta<2\pi\cos\theta-\sin\theta=1$ for $0\leq\theta<2\pi$
Fill in the missing numbers to find the correct answer/s:

1.) $\theta=\theta=$ Answer

2.) $\theta=\theta=$ Answer $\pi\pi$ / Answer

$f(x)=5x+6, g(x)=3x^2-4x+8f(x)=5x+6,g(x)=3x2-4x+8$. Find $(f-g)(x)(f-g)(x)$.

Select one:

- a. $(f-g)(x)=-3x^2-9x-2(f-g)(x)=-3x2-9x-2$ **wrong**
- b. $(f-g)(x)=3x^2-9x+2(f-g)(x)=3x2-9x+2$
- c. $(f-g)(x)=3x^2-9x-2(f-g)(x)=3x2-9x-2$
- d. $(f-g)(x)=-3x^2-9x+2$

Find the inverse of $h(x)=32x+1h(x)=32x+1$

Select one:

- a. $h^{-1}(x)=3-x2xh-1(x)=3-x2x$
- b. $h^{-1}(x)=3+x2xh-1(x)=3+x2x$
- c. $h^{-1}(x)=-3+x2xh-1(x)=-3+x2x$

d. $h_{-1}(x)=-3-x2x$

Find the inverse of $f(x)=2x+3f(x)=2x+3$

Select one:

a. $f_{-1}(x)=-x+32f-1(x)=-x+32$

b. $f_{-1}(x)=x+32f-1(x)=x+32$

c. $f_{-1}(x)=-x-32f-1(x)=-x-32$

d. $f_{-1}(x)=x-32$

Answer 3