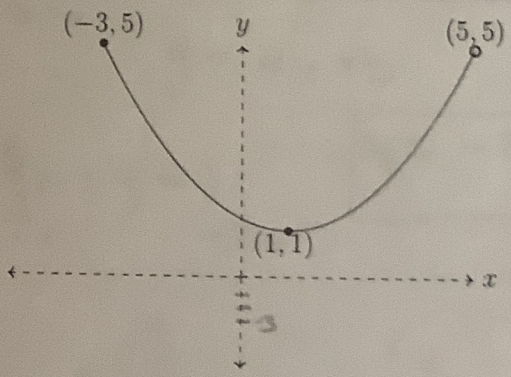
Math11000 Section 3962 Quiz 4
Summer 2023, May 16

7

Name: Lisa Singh [1 pt]

Problem 1:



For the function f whose graph is drawn above, find domain of f, range of f and $f(-3)$. Note that there is an open dot at the point $(5, 5)$. [5 pts]

Domain of f $\{x \mid x$ is a real number$\} = \{x \mid x \geq -3$ and $x < 5\}$

Range of f $\{y \mid y \geq 1$ and $y \leq 5\}$

$f(-3) =$ No number paired with (-3)

3

11
5

Problem 2:

1. Line L_1 has slope 2 and y-intercept $(0, -1)$. Find the equation of L_1. [2 pts]
2. Line L_2 has equation $y = -\frac{1}{2}x + 1$. Find whether lines L_1, L_2 are parallel, perpendicular or neither. [2 pts]

3

① $m = 2$ $b = -1$

$\Rightarrow y = 2x - 1$ ✓

② $2x - 1 = -\frac{1}{2}x + 1$

$2(0) - 1 = -\frac{1}{2}(0) + 1$

$-1 = 1$

$2 \cdot \frac{-1}{2} = -1$

perpendicular ✓

Math11000 Section 3962 Quiz 5
Summer 2023, May 17

8

Name: Lisa Singh [1 pt]

Problem 1: Find the equation of line passing through the point $(1, 1)$ and parallel to the line $2x + y = 1$. [4 pts]

$y = mx + b$

$2x + y = 1$
$-2x \quad -2x$

$y = -2x + 1$

$(y-1) = -2(x-1)$

slope

2

Problem 2: Find the equation of the line passing through the points $(1, 0)$ and $(2, 1)$. [5 pts]

x_1, y_1 x_2, y_2

$y - 0 = m(x - 2)$

$m = \frac{1-0}{2-1} = \frac{1}{1}$ $m = 1$ ✓

$y - 0 = 1(x - 2)$

$y - 0 = x - 2$
$+0 \quad +0$

$y = x - 2$

$y = x - 1$

5

Math11000 Section 3962 Quiz 6
Summer 2023, May 18

Name: Lisa Singh [1 pt]

8

Problem 1: Let $f(x) = \frac{1}{x}$ and $g(x) = x - 2$.

1. Find $(f.g)(4)$ [2 pts]
2. Find the domain of f/g. [3 pts]

$f(-2) \cdot g(-2) = f(4) \cdot g(4) = \frac{1}{4} \cdot (4-2) = \frac{2}{4} = \frac{1}{2}$

Find the domain of f/g confused

tried

$f/g = \frac{1}{x-2}$

→ Denominator is $x-2$

$x-2=0 \Rightarrow x=2$

$D(f/g) \{x \mid x$ is any real numbers $x \neq 0$ and $x \neq \frac{1}{2}$ 2

4

Problem 2: Solve the system of linear equations $x + y = 3$ and $x - y = 1$. [4 pts]

$x+y=3$

$-1(x-y=1)$

$x+y=3$

$-x+y=-1$

$2y=2$

$\Rightarrow y=1$

$x+y=3$

$+1 \quad +1$

$y=4$

2+1

$x+1=3$

$\Rightarrow x=2$

$-x=2$

$-1 \quad -1$

$x=-1$