

2nd Hour

Final Exam Review Schedule – Algebra II A

- Monday November 21st** -- After quiz, review 1: Linear Functions and Function Operations
Tuesday November 22nd -- Review 2: Inverse functions, Families of functions, Absolute Value Functions, Start matrices.
Wednesday November 23rd (Half day) – Review 3: Finish matrices
Monday November 28th -- Review 4: Quadratics and Exponential Functions
Tuesday November 29th – Practice Exam
Wednesday November 30th – Practice Exam results. Exams for hour 1.
Thursday December 1st -- Exams hours 2 and 3
Friday December 2nd – Exams hours 4 and 5
Monday December 5th – Start Trimester 2

About the Final Exam

66 questions

Worth 13% of final grade

Cheat sheet allowed - *Front and back - Normal size*

All hour will be given to complete the exam

- *Multiple choice*

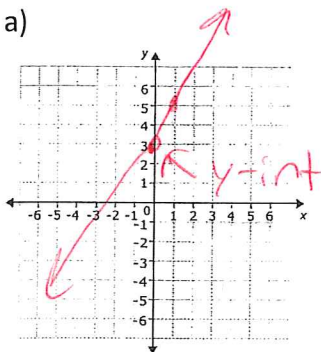
Review 1

Linear Functions

May be different depending on hour.

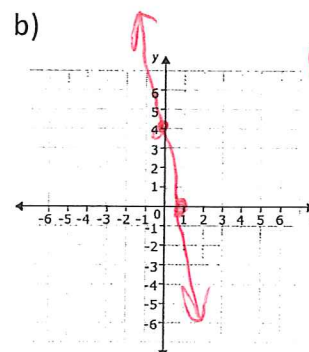
1) What is the equation of the line in slope-intercept form?

a)



Handwritten notes:
 $y = mx + b$
slope \downarrow m , y-int \downarrow b
 $y = \frac{2}{1}x + 3$

b)



$y = -\frac{4}{1}x + 4$

Slope = Rise / Run

2) What is the equation of the line in point-slope form that passes through the two given points?

a) $(-2, 4), (6, 8)$

Handwritten work for part a:
 $m = \frac{8-4}{6-(-2)} = \frac{4}{8} = \frac{1}{2}$
 $y - y_1 = m(x - x_1)$
 $y - 4 = \frac{1}{2}(x - (-2))$
 $y - 4 = \frac{1}{2}(x + 2)$

b) $(-4, -1), (2, 10)$

Handwritten work for part b:
 $m = \frac{10 - (-1)}{2 - (-4)} = \frac{11}{6}$
 $y - y_1 = m(x - x_1)$
 $y - (-1) = \frac{11}{6}(x - (-4))$
 $y + 1 = \frac{11}{6}(x + 4)$

same slope

$$y = mx + b$$

7) Find the line parallel to $y = -3x + 3$ through the point $(4, 3)$ in slope-intercept form.

x y ↑

$$y = -3x + b$$

$$3 = -3(4) + b$$

$$3 = -12 + b$$

$$15 = b$$

$y = -3x + 15$

opp. reciprocal
 Ex: $\frac{5}{4} \rightarrow -\frac{4}{5}$

8) Find the line perpendicular to the line $y = 2x + 4$ through the point $(-1, 2)$ in slope-intercept.

opp. rec. of 2 is $-\frac{1}{2}$

$$y = -\frac{1}{2}x + b$$

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

$$2 = \frac{1}{2} + b$$

$y = -\frac{1}{2}x + 1.5$

Function Operations

9) Suppose $f(x) = -3x + 7$ and $g(x) = 4x + 1$. Find:

$$\frac{-0.5 - 0.5}{1.5 = b}$$

a) $f(x) + g(x)$

b) $f(x) - g(x)$

$$(-3x + 7) + (4x + 1)$$

$x + 8$

$$(-3x + 7) - (4x + 1)$$

$$-3x + 7 - 4x - 1$$

$-7x + 6$

c) $f \cdot g$

$$(-3x + 7)(4x + 1)$$

$$-12x^2 - 3x + 28x + 7$$

$-12x^2 + 25x + 7$

10) Let $f(x) = 3x + 3$ and $g(x) = x + 1$. Find $\frac{f}{g}$ and its domain.

$$\frac{3x + 3}{x + 1} = \frac{3(x + 1)}{x + 1} = 3$$

set denom. $\neq 0$

$x + 1 \neq 0$
 $x \neq -1$

11) Let $f(x) = 2x - 2$ and $g(x) = x - 1$. Find $\frac{f}{g}$ and its domain.

$$\frac{2x - 2}{x - 1} = \frac{2(x - 1)}{x - 1} = 2$$

set denom. $\neq 0$

$x - 1 \neq 0$
 $x \neq 1$