Possible 7-1 Activities

N- Use Desmos for exploration and explanation?

FM: 4.1: Given formula and parent, describe transformation and vice versa.

Given formula with no parent given, describe parent and transformation.

Graph of parent and transformation, write equation of transformed function.

Match SQRT transformed graph with formula.

Describe in general for 5f(2x+1)-7, etc.

Given un-famous graph, sketch graph of h(x-2)+7, etc.

S-Z: Presents by charts, reasoning.

p. 123: Plot SQRT(x) and 3 points, do transformation and plot where 3 pts. End up. Does similar throughout section. Includes order issue: p. 127-128 (Note: follow a point in each order and see which way ends up the same as plugging in the x-value)

p. 135: “Order” summary table.

HW: p. 140: If (2, -3) on f, find where it goes.

19-53: Given graph of f, graph transformed

#54: Describe: Find formula from description.

#64: Given 2 graphs, write formula for transformed.

#67: What happens if we reflect odd function across y-axis, etc.

Active Reading (a ton of stuff)

5.1/5.2: Vert/Horiz Translations

6.1-6.3: Reflections and Vertical stretches (No f(ax))

5.1.1: Given form for f, find f(x+6), etc.

5.1.6-14: Swimmer: tries regular board, then goes to high-dive. 5.1.12: Jumps in 2 seconds too late. To find swimmer’s height at t seconds, need to look at regular swimmer 2 secs before= f(x-2).

5.1.15-16: Geogebra graph slider for f(x) + k, f(x+h)+k (negatives allowed).

5.1.17 y=4x = slope 4 and (0, 0). What is eqn for slope 4 and (7, 15)?. #19: y=mx.

5.2: Formalizes 5.1

5.2.2: Geogebra

5.2.10: Various of given graph or formula. Find other things. 5.2.13: Given graph and new graph, find formula (mult. choice).

5.2.15: Newton’s: Change time of taking out of oven.

5.2.16: “two weeks from now, temp. will be 5 degrees warmer”, etc. 5.2.17 as well.

5.2.19: f(x+3): what is new domain?

HW #1, 2: Geogebra, what is graph if threw 1 sec. earlier?

#3: Find formula for transf. of f

#14: Given table values, find f(x+3) for x = 2, etc.

#15: Given (x+3)^3 – 8, give transformation to get back to x^3.

Given (-9, 8) on g, write a formula for transf that takes it to (-6, 8), etc.

#20: Graph of x^2 + 13 is what compared to x^2 + 10, etc.

#21: (-7, 8) on g means g(x-5) contains?

#23: g table vs. new table.

#24: Cover charge rose $5 or 1st 3 drinks free, etc.

#25: Table of g: Temp. at deph f(x+50) says what about new temp/depth (mult. choice)

6.1 (Active Reading still)

6.1.1: If f(3) = 7, what is 6f(3)? More following (e.g., Is –x always negative)

6.1.6: h(-4)=5 means what point is on –h(x)?

6.1.10: Geogebra for g(-x)

6.1.12: Table f(x), f(-x), -f(x): Fill out if possible.

6.1.15: More sliders: Go until have new points (includes (0, -8))

6.2: 6.2.3: Price of coffee = .5 of regular cost.

Note: No f(ax)

6.3: Formalizes 6.1, 6.2

HW: 1. Cost of f(n) n chairs: what does f(n+10) mean (mult.choice)

2: Area of circle: Which means r went up by 5%?

#6: Fill out table so f is odd, etc.

13: Match graph with f(x+4), etc.

18: f = 2^x. What is –f(-x) + 7?

23: (7, 4) on original means what point on new?

24: Fill out table given values of f Also #35.

28: y = ln x. Find formula for reflection about x-axis, etc.

30: How to obtain 3-e^x from e^x (Note: or from e^x – 6, etc.?)

34: y = SQRT(2x-x^2) and graph: Find formula for new given graphs.

37: y= Af(Bx) + C. What is B for horiz. Stretch of 2? (Note: Only time for horiz. Stretch in Active Learning Approach)

38: Given dom/rng of f, what is dom/rng of f(5x), etc.?

39: f(x) = tip for driving x miles . Different scenarios: e.g., drove 5 extra miles.

APC: p. 85: Desmos exploration.

Explains a bit more theoretically. E.g., h = f(x-2) says h(2) = f(0)

Note: No f(ax).

HW: #5: (9, 4) on f means f(x-6) contains? Etc.

6: g = f(x) + 5: Compare avg rates over intervals for each and comparing.

Calc-Medic: 1.5: Explore via Desmos: (specific given function for activity)

4: Mult. Choice: a(t) = allowance at age t. What gives allowance 3 years younger?

MFG: 2.3:

2.40: What happens to vertical asymp with transformations? (Note: Do for HA as well)

2.43: T=f(t)= temp. in house after turning on AC: What does new graph mean?

Argues horiz. Shift with table

Example 2.48: healthy eyes vs. glaucoma graph (shift)

2.49: Caffeine vs. time after drinking coffee: Compare interpret through graphs

2.58: f = length of daylight in Rome. G = length of daylight in Helsinki: Graphs given: Interpret

HW: #2-18: Describe how to transform basic graph to given formula.

#31: -1/(3x)

#71-76: Stories with basic graph. Describe what new graph would mean.