In-Class Activities

Mathematics Department
Fort Lewis College

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These activities are designed to be used in class to help students understand the material. They are not graded, but students are encouraged to work on them in groups and ask the instructor for help when needed.

Math 113 Function Intro Worksheet

Objectives

- Use an externally generated image in an exercise.
- Use an internally generated table in an exercise.
- Use an ordered list for enumeration within an exercise.

In this worksheet we will work with function notation and see a couple Pretext techniques. The exercises are from the active learning ancilliary materials from ***Functions Modelling Change: A Preparation for Calculus*** by Connaly et al.

1. Use the figure below to fill in the missing values.

(a) $f(0) = ?$

(b) $f(?) = 0$

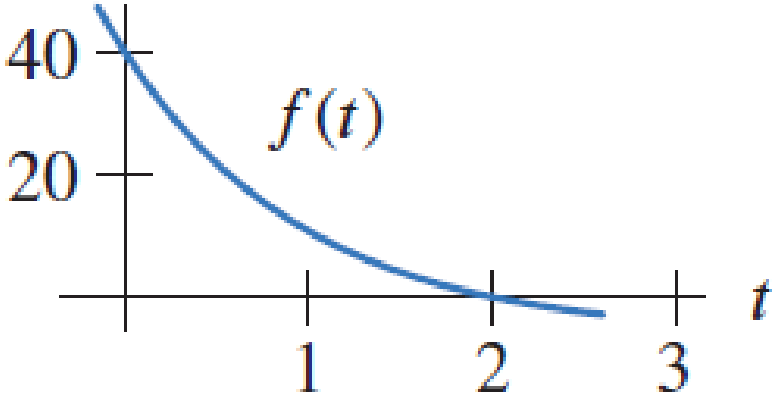


Figure 1 Graph saved in assets as .png from outside source.

2. Data for rainfall, $R = f(t)$, in Tucson, Arizona is given in Table 2 below, where time, t, is in months with $t = 1$ being January.

Table 2

t (months)	1	2	3	4	5
R (inches)	0	0.1	0.54	0.1	0.35

(a) Find and interpret $f(5)$.

(b) Solve $f(t) = 0$ and interpret the meaning of your answer.

(c) Solve $f(t) = 0.1$ and interpret the meaning of your answer.

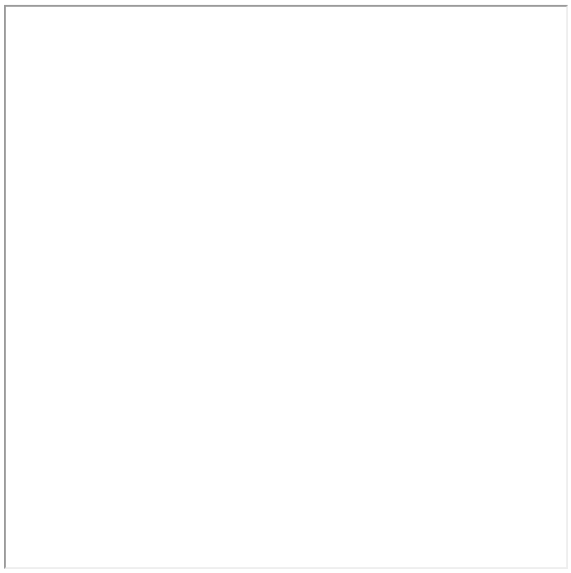
Math 121 Graphical Transformation Worksheet

Objectives

- Include an interactive (Desmos) in an activity with a QR code available for the print version.

This activity asks students to describe the effect of different affine transformation of functions after experimenting with Desmos. The pre-built Desmos graph appears in the html version while a QR code is created in the print version.

1. Use the interactive Desmos graph given above with sliders for a and b to describe the effect of each algebraic substitutions on the graph of $y = f(x)$.



Standalone

Figure 3 Note: frhv1grqhj is the last part of the Desmos graph. When you modify the Desmos graph and re-save it, that may change the url.

(a) $f(-x)$ has the same graph as $f(x)$, except _____ _____.

(b) $-f(x)$ has the same graph as $f(x)$, except _____ _____.

(c) $f(x - a)$ has the same graph as $f(x)$, except _____ _____.

(d) $f(x + a)$ has the same graph as $f(x)$, except _____ _____.

(e) $f(x) + b$ has the same graph as $f(x)$, except _____ _____.

(f) $f(x) + b$ has the same graph as $f(x)$, except _____ _____.

Math 221 Tangent Line Worksheet

This is the introduction to the activity.

1. This is the first exercise.

Math 222 Series Test Worksheet

This is the introduction to the activity.

1. This is the first exercise.