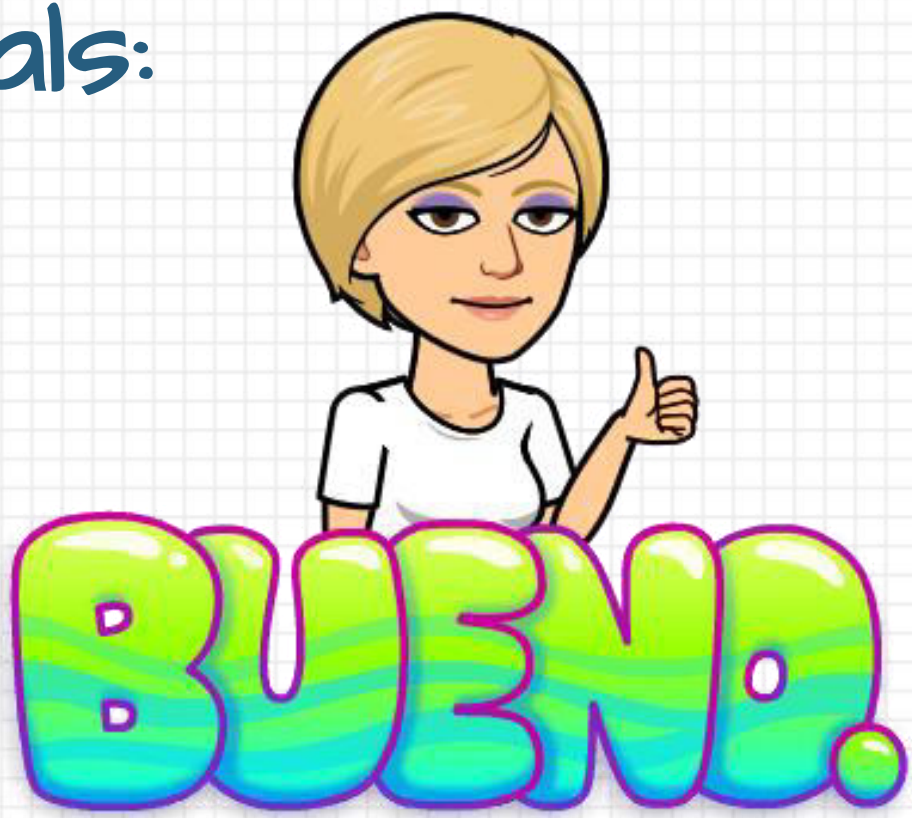
Today's Materials:

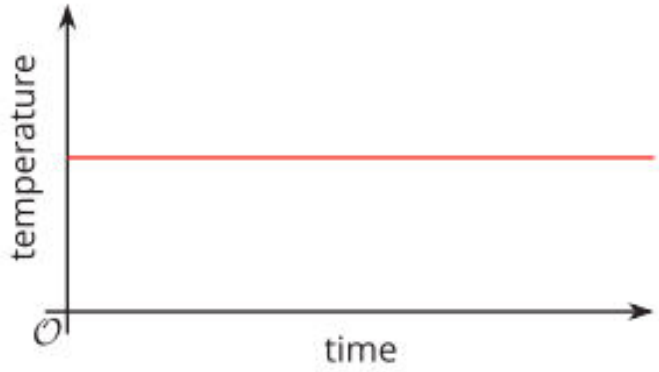
- device
- pencil
- Packet



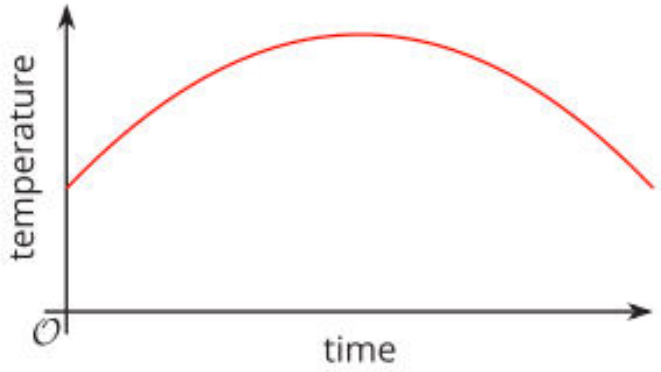
8.1 Which One Doesn't Belong: Temperature over Time

Which One Doesn't Belong?

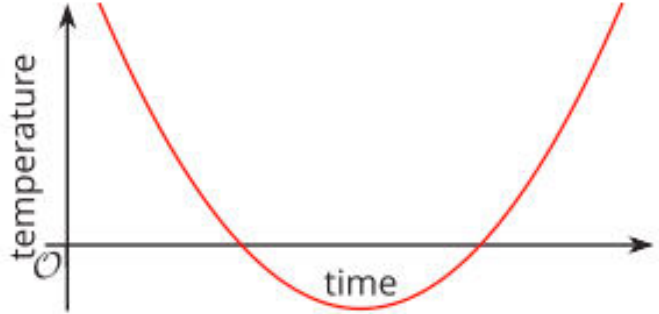
A



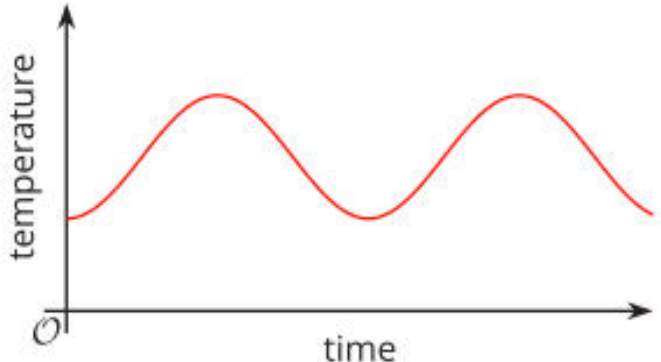
B



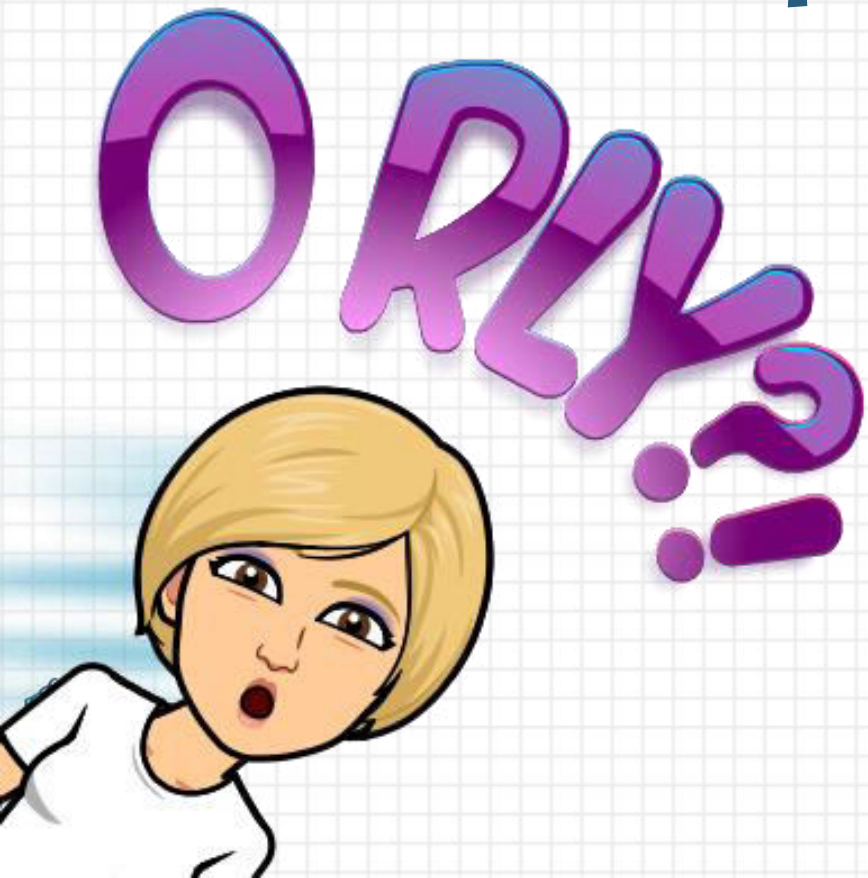
C



D



Today's Goal:



- I can explain the average rate of change of a function in terms of a situation.
- I can make sense of important features of a graph and explain what they mean in a situation.
- When given a description or a visual representation of a situation, I can sketch a graph that shows important features of the situation.

8.2 Flag Rising (Part 1)

Page 32

Here is a Flag Raising Ceremony

https://player.vimeo.com/video/337951456

8.2 Flag raising

For each graph assigned to you, explain what it tells us about the flag:

A: Groups 1 and 2

B: Groups 3 and 4

C: Groups 5 and 6

D: Groups 7 and 8

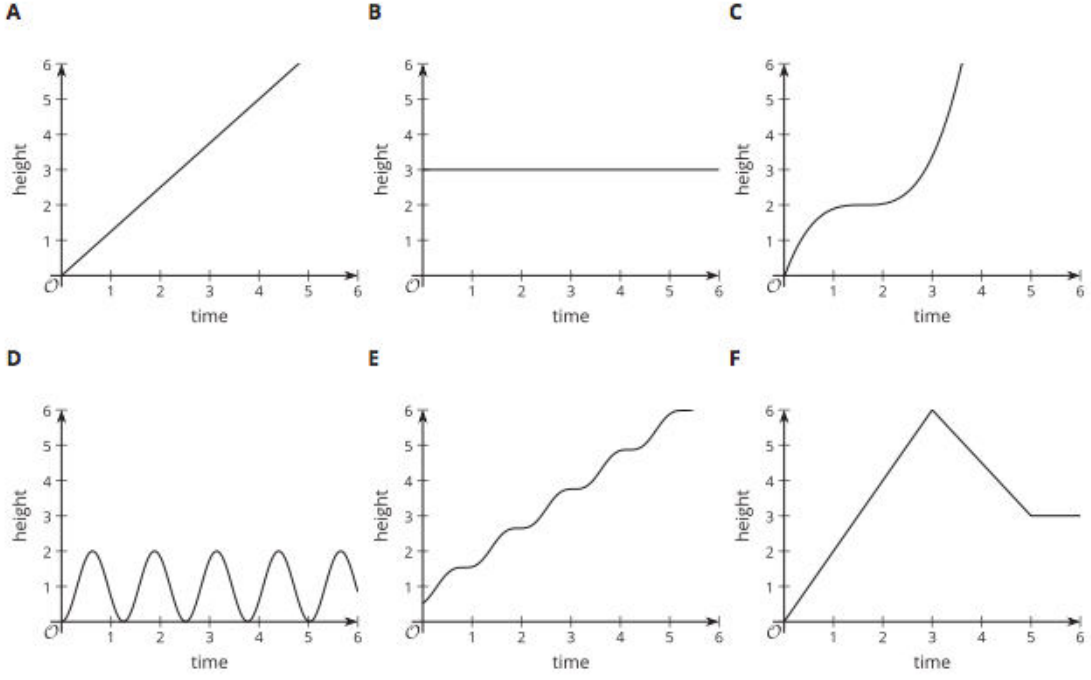
E: Groups 9 and 10

F: Group 11

Decide as a group which graph(s) appear to be most realistic and which ones least realistic

A flag ceremony is held at a Fourth of July event. The height of the flag is a function of time.

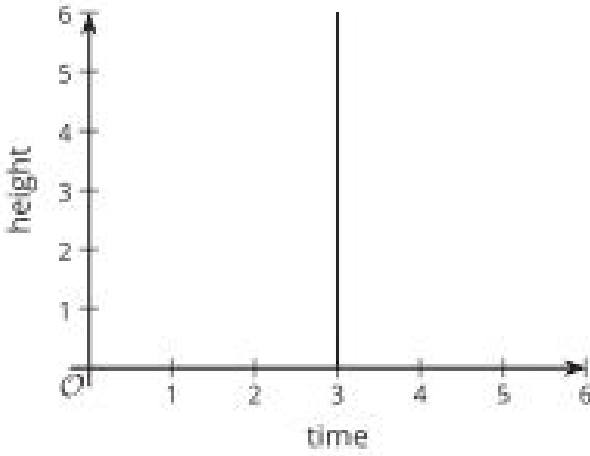
Here are some graphs that could each be a possible representation of the function.



1. a. For each graph assigned to you, explain what it tells us about the flag.

8.2 Flag Raising (Part 1)

Here is another graph that relates time and height.



a. Can this graph represent the time and height of the flag? Explain your reasoning.

b. Is this a graph of a function? Explain your reasoning.

8.3 Flag Raising (Part 2)

Page 34

Here is a second video of a flag being raised

https://player.vimeo.com/video/337951448

8.2 Flag Raising (Part 2)

Function H gives the height of the flag over time. Height is measured in feet. Time is measured in seconds since the flag is fully secured to the string, which is when the video clip begins.

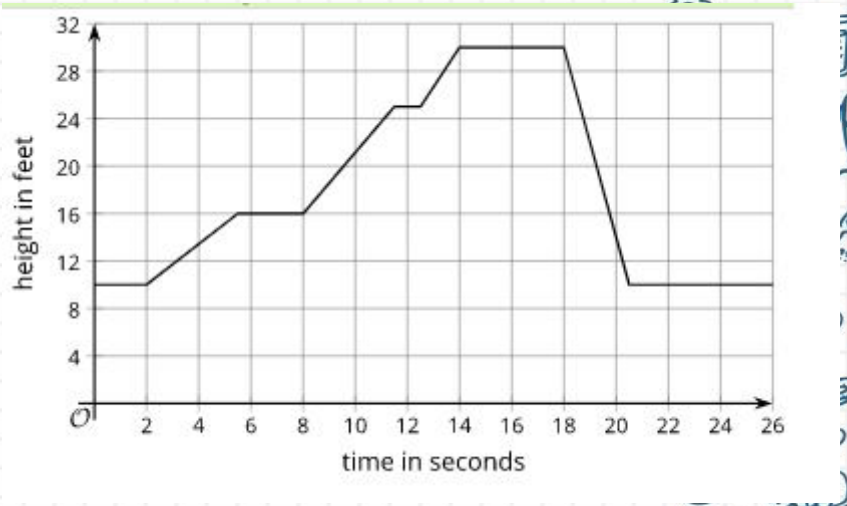
a. On the coordinate plane, sketch a graph that could represent function . Be sure to include a label and a scale for each axis.

b. Use your graph to estimate the average rate of change from the time the flag starts moving to the time it stops. Be prepared to explain what the average rate of change tells us about the flag.

Synthesis 8.2 Flag Raising (Part 2)

Sample Graph:

What are the key features of this graph?



-Intercepts

-Maximum

-Minimum

-Intervals when the function increases, remains constant, or decreases

Cool Down

Caught in a Tree

Lesson 8: Interpreting and Creating Graphs

Cool Down: Caught in a Tree

A child tosses a baseball up into the air. On its way down, it gets caught in a tree for several seconds before falling down to the ground.

Sketch a graph that represents the height of the ball, h, as a function of time, t.

Be sure to include a label and a scale for each axis.