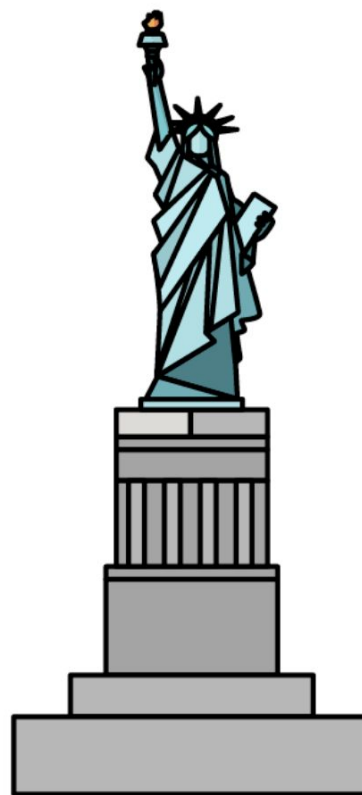
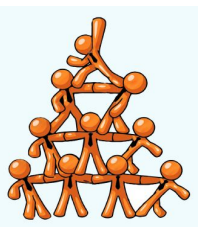


3-1: Learning Goals

- Let's investigate the Burj Khalifa building.

3-1-1: Tilings

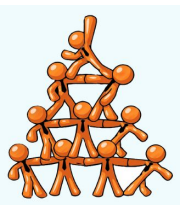
Use the picture to estimate the height of Hyperion, the tallest known tree.



3-1-2: Window Washing



Burj Khalifa Copyright Owner: smarko License: Public Doman Via: [Pixabay](#)



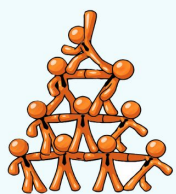
3-1-2: Window Washing



A window-washing crew can finish 15 windows in 18 minutes.

If this crew was assigned to wash all the windows on the outside of the Burj Khalifa, how long will the crew be washing at this rate?

Window Washers Copyright Owner:
sneakerdog License: [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/) Via: [Flickr](https://www.flickr.com/photos/sneakerdog/)

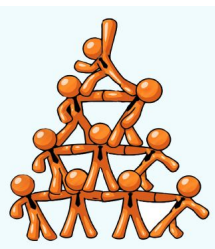


3-1-3: Climbing the Burj Khalifa

In 2011, a professional climber scaled the outside of the Burj Khalifa, making it all the way to 828 meters (the highest point on which a person can stand) in 6 hours.

Assuming they climbed at the same rate the whole way:

1. How far did they climb in the first 2 hours?
2. How far did they climb in 5 hours?
3. How far did they climb in the final 15 minutes?

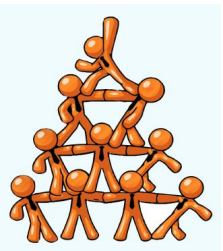


3-1: Lesson Synthesis

$1\frac{1}{5}$ minutes per window

138 meters per hour

- If the Burj Khalifa had 10,000 windows, how many minutes would it take the washing crew to clean all of them? 100,000 windows?
- How high is the climber after 2.5 hours? 2.25 hours? 2.2 hours?



3-1: Learning Targets

- I can see that thinking about “how much for 1” is useful for solving different types of problems.



3-1-4: Going Up?

The fastest elevators in the Burj Khalifa can travel 330 feet in just 10 seconds. How far does the elevator travel in 11 seconds? Explain your reasoning.



3: Pre-Assessment

