

## TITLE

# HOW MUCH IS 1/32?: USING MATH SKILLS TO TALK ABOUT PRESERVING THE HISTORY AND CULTURE OF HAWAII

GRADE LEVEL: ANYONE WHO USES MATH AND LOVES STORYTELLING!

**SUBJECT:** English, Math, History

**THEME:** Activism, Bias and Stereotype, Civil Rights, Colonization, Identity and Culture

**STANDARDS:** Common Core English and Math

### OBJECTIVES:

**Students will be able to**

- Explain what 1/32 means in human terms when it comes to determining one's background.
- Apply facts from Hawaii's history that bring the point home as to why a fraction like 1/32 is important.
- Construct a meaningful definition of the word "culture"

### ESSENTIAL QUESTIONS:

- How does math help us to understand complex questions relating to social studies, civics, and sociology?
- Can terms like identity and culture be quantified in any meaningful way?

### MATERIALS NEEDED:

- Internet access & devices if available
- Paper
- Writing utensils
- Calculator (optional)

CREDIT AUTHOR AND CONTACT: SANDY TING

LAST UPDATE: JAN, 10TH, 2024

### CONTEXT FOR THE LESSON:

This lesson uses language and historical events from Hawai'i to teach math skills. The math becomes important when legislation is passed that reserves land for Native Hawaiians. However, over time the percentage of Native Hawaiian blood that determines qualifying under various programs has changed or is subject to debate. By using actual legislative history and historical events, students can learn math while also learning about history, civics, and sociology.

### VOCABULARY:

Explore and ask students to research and discuss what these terms are and how language as a fluid part of society can change in meaning and connotation. Provide examples of the terms using stories, images, events, and other forms of communication and expression. Definitions below are meant to provide some context in broad strokes.

- **Hapa** - a term used to describe people of mixed Asian race. Some people call themselves hapa while others find the term derogatory. As a general rule, ask people how they would like to be introduced and identified - people don't always want others using terms they feel comfortable using for themselves. (For example, I might say my mom is being annoying, but no one else is allowed to.)
- **Biracial/multiracial** - people whose backgrounds are made up of two or more racial groups.)
- **Multiethnic** - a combination of multiple cultural groups and expressions. People, places, art, music - can all be described as multiethnic.
- **Multicultural** - a combination of the customs, arts, social institutions, and achievements of a particular nation, people, or social group. People, places, art, music - can all be described as multiethnic.

### READ & EXAMINE:

- **Guide students to research and learn about the following:**
  - [\*What the Hawaiian homestead is\*](#)
  - [\*Department of Hawaiian Home Lands | Prince Jonah Kūhiō Kalaniana'ole\*](#)
  - How and why the Hawaiian homestead came to be: see resource above
  - Current laws for owning/passing down Hawaiian homestead: <https://kawaiola.news/hookahuawaiwai/from-a-five-year-pilot-to-a-century-of-homesteading/>
  - What the Bayonet Constitution is and its residual effects: [\*The Bayonet Constitution\*](#)  
[\*Jul 6, 1887 CE: Bayonet Constitution | National Geographic Society\*](#)



**CREDIT AUTHOR AND CONTACT:** SANDY TING

**LAST UPDATE:** JAN, 10TH, 2024



## RECONVENE:

### Students should reconvene as a class to review the following:

- Under current federal law, about 200,000 acres across Hawai'i are reserved for Native Hawaiian people who are at least 50% Hawaiian.  
[From a Five-Year Pilot to a Century of Homesteading - Ka Wai Ola](#)
- Hawaiian records departments contain birth certificates and other vital documents that can help applicants prove they are at least 50% Native Hawaiian.
- A Native Hawai'ian congressman introduced legislation to change requirements for passing down Hawai'ian homestead leases to relatives from 50% Hawaiian to 1/32 Hawaiian.  
[Congressman Eyes Blood Quantum Rules for Hawaiian Homelands | Hawaii News](#)
- Groups have lobbied to limit the program to full-blooded Hawaiians, while others insisted on a blood quantum of 1/32 due to Hawai'i having been colonized and seized by armed forces - thus influencing the makeup of present and future generations.  
[Blood Quantum Policy an 'Act of Compromise' for Hawaiian Homes | Hawaii'i Public Radio](#)

## ACTIVITY

The Bayonet Constitution took place in 1887. We have had approximately 9 generations since that year. Determine mathematically how one might arrive at being 1/32 of any nationality in 9 generations with one starting individual being 100% Hawaiian.

## CIVIL DIALOGUE:

- We cannot control our genetic make up, and in some cases, our genetics happened because of violent historical events such as the Bayonet Constitution. How should such an event guide our laws and approaches to living today?
- Randomly assign learners to three groups.
  - Group 1: Make a case for the 1/32 blood quantum.
  - Group 2: Make a case for the 50% blood quantum.
  - Group 3: Make a case for no quantum at all.
- The groups' task is to engage in a dialogue with one another. Emphasize that this isn't meant to be a debate with a "winner" but a dialogue to build toward a deeper understanding of peoples' rights, identities, and the effects of colonialism.
- Each group begins by creating a poster pledging a set of norms and standards reflecting their commitment and responsibility with regards to engaging in civil dialogue with the other two groups. Share out and hang up these posters for the discussion.
- Each group will begin with their stance, supporting statements using historical events, and counterclaims.
- The educator(s) will moderate the discussion, reinforcing the posted group and class norms.
- Allow for an organic conclusion.



**CREDIT AUTHOR AND CONTACT:** SANDY TING

**LAST UPDATED:** JAN, 10TH, 2024





## CLASS REFLECTION:

**Have students reflect on the real-life implications of a fraction, like 1/32, and how it impacts people like Native Hawaiians and other indigenous peoples.**

- Define culture. What are the biggest influencers of your culture?
- How do we create and sustain a culture? Give examples of ways that you do both.
- When do people own a culture? Do people own a culture?
- Discuss cultural appropriation vs. cultural appreciation.
- Does cultural appreciation give you rights to a culture?
- Can we quantify culture?
- How do we measure identity?
- What ways do we already rank and sort people?

## RESOURCES:

Department of Hawai'ian Homelands

<https://dhhl.hawaii.gov/kuhio/>

Department of Hawai'ian Homelands

<https://kawaiola.news/hookahuawaiwai/from-a-five-year-pilot-to-a-century-of-homesteading/>

National Geographic, The Bayonet Constitution

<https://www.nationalgeographic.org/thisday/jul6/bayonet-constitution/>

U.S. News and World Reports

<https://www.usnews.com/news/best-states/hawaii/articles/2021-07-15/congressman-eyes-blood-quantum-rules-for-hawaiian-homelands>

Hawai'i Public Radio

<https://www.hawaiipublicradio.org/local-news/2021-07-14/blood-quantum-policy-an-act-of-compromise-for-hawaiian-homes>



**CREDIT AUTHOR AND CONTACT:** SANDY TING

**RELEASE DATE:** JAN, 10TH, 2024

