Christina School District Assignment Board

Grade Level: 10th

Week of May 4th, 2020

	Day 1	Day 2	Day 3	Day 4	Day 5
ELA	This week we will use all that you have learned throughout the school year and your creative side to deepen your understanding of literary concepts using the text **"Escape from Alcatraz".** ---------- Brainstorm. What makes a place escape proof? Write a paragraph or compile a list. If you were confined to a place what items or procedures would make that place impossible to escape from? Does it have a unique location? Are there guards/machines,	Read the text, **"Escape from Alcatraz".** Pay close attention to how the author describes the prison. Underline words/phrases that support an escape proof prison. After reading, respond briefly; Alcatraz was considered escape-proof. Do you agree or disagree? Why/why not?	Re-read the text. Answer the **Digging Deeper** Questions 1-7	Read the two poems **"Alcatraz"** and **"Blue Prints of Escape".** Answer the questions that follow.	Finish the story. Using details from the article, write a short story about the escape from Alcatraz from the point of view of Frank Morris or one of the Anglin brothers. Use descriptive language, include a specific setting, and dialogue. Be sure to include their fate—that is, whether they survived or not.

		or other things that would make this place hard to escape? Is escape proof even a realistic concept?				
Math (IM2)		*Law of Cosines* *Answer "Which One Doesn't Belong?" and justify your choice. (attached)* Review Concept Summary: Law of Cosines (attached), and complete Law of Cosines Worksheet 1 #1-3. (attached)	Complete Law of Cosines Worksheet 2 #1-6. (attached) Reference Concept Summary if needed.	Read pages 69-70. (attached) Use the examples as a guide to complete p. 71 #1-10. (attached)	Complete p. 72 #11-24. Use the examples from pages 69-70 as a guide if needed. (attached)	Complete p. 72 #25-36. Use the examples from pages 69-70 as a guide if needed. (attached)
Science		**Meet the Ologist (part 1):** Read pp.1-2. Stop at a stopping point that makes sense to you. Highlight, underline and/or annotate for understanding.	**Meet the Ologist (part 2):** Read pp.3-4. Stop at a stopping point that makes sense to you. Highlight, underline and/or annotate for understanding.	**Meet the Ologist (part 3):** Read pp.5-6. Stop at a stopping point that makes sense to you. Highlight, underline and/or annotate for understanding.	**Meet the Ologist (part 4):** Read pp.7-8. Stop at a stopping point that makes sense to you. Highlight, underline and/or annotate for understanding.	**Meet the Ologist (part 5):** Read pp.9. Stop at a stopping point that makes sense to you. Highlight, underline and/or annotate for understanding.
Social Studies	**Civics**	Complete Activity 1 from the document titled, "Woodrow Wilson's Stroke"	Complete Activity 2, "Discussion Questions A" from the document titled, "Woodrow Wilson's Stroke"	Complete Activity 2, "Discussion Questions B" from the document titled, "Woodrow Wilson's Stroke"	Complete Activity 3, "Overarching Question" from the document titled, "Woodrow Wilson's Stroke"	Complete Activity 3, "Scenario" from the document titled, "Woodrow Wilson's Stroke" NOTE: Activity 3, "Debrief Your Thoughts" and "Your Own Legislation" will be on next week's CSD Assignment Board.
	Economics	Complete Activity 1,	Complete Activity 1,	Complete Activity 1,	Complete Activity 2,	Complete Activity 2,

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		Questions 1 & 2 from the document titled, “Deflation: Who Let the Air Out?”	Questions 3 & 4 from the document titled, “Deflation: Who Let the Air Out?”	Question 5 from the document titled, “Deflation: Who Let the Air Out?”	For Further Study, Question 1 from the document titled, “Deflation: Who Let the Air Out?”	For Further Study, Question 2 from the document titled, “Deflation: Who Let the Air Out?”

Escape from Alcatraz

In 1962, three inmates attempted to escape from America's toughest prison. Did they make it to freedom?
By Deborah Hopkinson

At exactly 9:30 on the night of June 11, 1962, the lights at Alcatraz prison went out. Most of the inmates shivered on their thin, narrow beds, trying to get some sleep.

But not Frank Morris. His heart pounding, Morris waited for the prison to quiet. If all went according to plan, he would never sleep behind bars again. For months, Morris and three other prisoners, Allen West and brothers Clarence and John Anglin, had been secretly plotting to escape from Alcatraz, a bleak prison perched on a rocky island in the middle of San Francisco Bay. People said it was impossible to break free from "the Rock," as Alcatraz was known. Morris and his cohorts were determined to prove everyone wrong.

The men had developed an ingenious plan. For months, they had been using stolen spoons and a power drill made out of a vacuum cleaner motor to dig away at the concrete walls of their prison cells. It was painstaking work, but eventually they made holes big enough to crawl through. The holes opened into the prison's ventilation system, where the men set up a secret workshop. Morris and his friends also took up a hobby: painting. That way, no one was suspicious when they ordered brushes, paints, and drawing boards. They used these supplies to create sections of fake wall to cover the holes in their cells.

Many Had Drowned

Men had tried to escape from Alcatraz before only to drown in the frigid waters of San Francisco Bay. Morris and his friends did not intend to swim though. Using stolen and handmade tools, they'd managed to fashion life jackets and a raft out of raincoats. Morris, who'd been imprisoned for bank burglary, was no stranger to escape. He had broken out of two other prisons.

But Alcatraz was different. Security was extremely tight. Guards counted the inmates many times each day and night; it wouldn't take a guard long to notice an empty cell. To buy some time, the men made dummies out of toilet paper, cardboard, and cement chips. They covered the dummy heads with hair stolen from the prison barbershop and painted faces on them. On the night of their escape, the men tucked the dummy heads into their beds. In the dim light, the heads looked real.

Now, as darkness settled over Alcatraz, everything was ready. Well, almost.

At the last minute, West could not get out of his cell. Morris and the Anglin brothers went on without him. They wriggled out of their cells and climbed up plumbing pipes. Finally, they stepped onto the roof. Carefully avoiding the prison searchlight, they crawled silently across the roof and scrambled down a drainpipe.

They were out. A salty breeze blew on their faces. Now all that stood between them and freedom was a 12-foot fence and the crashing, shark-infested waters of the bay. Men had made it this far before. None had made it to freedom. Some drowned. Others were turned back by the strong currents. One inmate had hidden in the caves carved into the island's shoreline, too scared to plunge into the water. Eventually, he was found and brought back. Could Morris and the Anglin brothers pull off the most daring escape in the history of Alcatraz?

Island of the Pelicans

By the night of this escape attempt in 1962, the small sandstone island of Alcatraz had been used as a prison on and off for more than 100 years. But its history goes back even further.

Alcatraz was named “Isla de los Alcatraces” (Island of the Pelicans) by Spanish explorer Juan Manuel de Ayala in 1775. After gold was discovered in California in 1848, people worried that San Francisco might be attacked. Barren Alcatraz, located about a mile and a half from shore, seemed the perfect place to build a fort.

During the Civil War, in the 1860s, the 22-acre island was used as a military prison. Then, in 1934, the U.S. Department of Justice took it over. Alcatraz was about to become the toughest and most feared prison in America.

The Bay

The waters of San Francisco Bay are treacherous. Powerful currents, deathly cold temperatures, and sharks are just some of the bay’s many dangers.

Ready for Troublemakers

During the early 1930s, the U.S. was hit by a crime wave. Robberies and murders were on the rise. Some criminals had become incredibly powerful; they were as well-known as celebrities. The public felt that a “super-prison” was what the country needed.

Desolate and isolated, Alcatraz seemed like the ideal place to incarcerate the most despicable criminals. Officials set out to build the most escape-proof prison in America. Cell blocks were turned into fortresses meant to hold those who had tried—and sometimes managed—to break out of other prisons.

In August 1934, Alcatraz opened as a federal prison. Penitentiaries across the country were notified that Alcatraz was ready to take troublemakers off their hands. As Alcatraz Warden James A. Johnston later wrote, “They would select their worst; I would take them and do my best.”

At 5 a.m. on August 19, 1934, 53 prisoners boarded a train in Atlanta, Georgia, for the long ride to California. They were to be some of the first inmates at Alcatraz. Officials couldn’t help feeling nervous. These men were going to Alcatraz because ordinary prisons couldn’t handle them. (All Alcatraz prisoners were men.)

Warden Johnston took every precaution. The prisoners rode in specially designed railroad cars with steel bars across the windows. No prisoner was allowed to leave his seat during any stop.

The 53 inmates arrived on August 22, 1934. By the end of the year, Alcatraz was housing more than 200 of America’s most feared criminals.

The Prison

Alcatraz was shut down in 1963, having become too expensive to operate. Today it is a landmark managed by the National Park Service. More than 1.5 million tourists visit every year.

Harsh Punishment

A prisoner at Alcatraz—or "Uncle Sam's Devil's Island," as it came to be called—found himself in a harsh, isolated world, punctuated by the clanging of bars and the distant blaring of foghorns. After a gong signaled wake up at 6:30 a.m., inmates cleaned their cells, then stood to be counted. At the shriek of a whistle, they marched single-file to breakfast, which lasted 20 minutes. After breakfast, utensils were counted.

During the day, guards marched inmates to jobs in the laundry, the garden, and the tailor shop. Head counts took place constantly. On Sundays and holidays, inmates had supervised recreation time. No newspapers or radios were allowed. Lights-out was at 9:30 p.m. sharp. Men who broke the rules faced harsh punishment, the most feared of which was solitary confinement. It was agony to be kept apart from everyone else, cooped up in a tiny concrete cell, some with only a hole in the floor for a toilet. In solitary confinement, some men were allowed mattresses at night, but others had no mattress at all. There was nothing to do but stare at the walls as time ticked by.

A Bitter Surprise

The most notorious felons couldn't beat Alcatraz—not even gangsters like Al "Scarface" Capone. To many, Capone symbolized the collapse of law and order in the 1920s. He made millions running illegal gambling and alcohol-selling operations in Chicago. He was said to have murdered at least a dozen people. Capone was used to having power, and he was proud of his reputation as a big shot. He figured he'd be able to pull strings to get special privileges at Alcatraz, just as he had in other prisons. As soon as he arrived, Capone met with Warden Johnston. "I have a lot of friends," he told the warden. "I expect to have a lot of visitors." Capone was in for a bitter surprise. He was allowed to see family, but not friends—or fellow gangsters. Every prisoner at Alcatraz was treated the same, even Al Capone. Eventually, Capone had to admit, "Alcatraz has got me licked."

The Mystery

The 1962 escape continues to fascinate the public. Scientists have studied the tides and currents from that night and found that the men could have made it to shore if they had left between 11:30 p.m. and midnight. More than 50 years after the escape, one U.S. Marshal is still investigating the case.

Daring Escapes

As tough as Alcatraz was, some prisoners still attempted to break out. During the Rock's 29 years as a federal prison, 36 prisoners attempted to escape. Twenty-three of the men were caught, six were killed, and two drowned. Two others were never found but are assumed to have drowned. That leaves three men: Frank Morris and John and Clarence Anglin.

After the night of June 11, 1962, they were never seen again.

When Morris and the Anglins were discovered missing, a massive search was conducted. A body was spotted floating in the bay—but it was never identified. According to some records, a raft was found on nearby Angel Island. There were rumors of a stolen car, which could have been used by the escapees.

In the end, officials concluded that the men had died. The powerful currents in the Bay could have dragged their raft out to sea. Even within the Bay, survival would have been unlikely had the men gone overboard. In the frigid water, they would have quickly succumbed to hypothermia or—had their makeshift life jackets failed—drowned.

Not everyone has accepted the officials' conclusion, though. People have speculated about the fate of Morris and the Anglins for decades. There have been many reported sightings. The family of the Anglin brothers insists that the men made it out and ended up in Brazil. In 2003, the show Myth Busters re-created the escape and determined that it is possible the men made it to shore. But nothing has been proved.

Digging Deeper

The hole Frank Morris chiseled into his jail cell, along with the fake section of wall that he made out of cardboard.
Bottom: The dummy head Morris created to fool the guards.

Answer the following questions in complete sentences.

1. Which evidence do you find more convincing: the evidence that Morris and the Anglin brothers made it or that they did not? Explain your answer with evidence from the text?

_____
_____
_____

2. Identify 2-3 reasons that Alcatraz was a good place for a prison?

_____
_____
_____

3. Why did the guards count the utensils after meals?

_____
_____
_____

4. How do the actions of the criminals and the guards support the idea that Alcatraz was escape proof?

_____
_____
_____

5. Why did the author give the history of Alcatraz after explaining the planned escape of the criminals? What is the intended impact on the reader?

_____
_____
_____

6. What images does the author use to reinforce the idea that Alcatraz was escape proof?

_____
_____
_____

7. Why does the author choose to include Al Capone in this text?

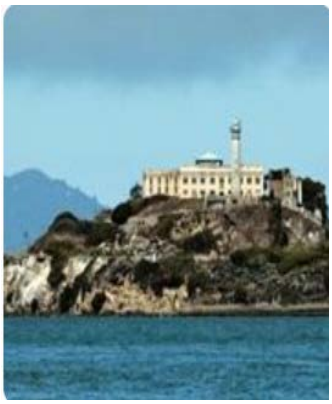
_____
_____
_____

Alcatraz

The tower stands,
a stark monument
a stone phallus
with blinding eyes,
a reminder of hopelessness,
power, restraint.

Archinomical indulgence
of deep state life narrators,
hell bent on censure.
Woe to those encumbered
by its shadow,
a circumference of misery,
mortared constraint, unlit,
bar the revolving blindness
of a lighthouse too close.

It's eyes now darkened,
a deluded disparity
left as testament to fate,
of a dock too dry,
yet sodden with tears of regret...



Blue Prints of Escape

Let's escape this damnation
trapped in a prison cell
where every breath is a luxury
and being wound free is less than hell,
Digging spoonful by spoonful
would be a mammoth task
yet anything is better
than living in this hole, and mask,
Sitting in contemplation
sketching blue prints in the air
this has to be flawless
or I will die from hands that do not care,
more than am I doing now
talking to myself and hoping
nobody ever takes their claustrophobia out on me
for in this place, I am not coping.

Understanding Poetry

1. What is the main idea of both poems? How do you know?

   _____
   _____
   _____

2. Compare and contrast the tone of each poem. Use examples from the poem to support your response.

   _____
   _____
   _____

3. How did reading the article first help you to understand the poems?

   _____
   _____
   _____

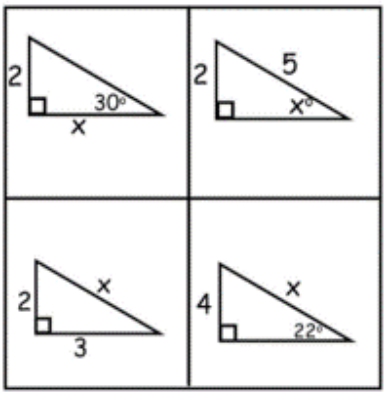
4. Each poem relates to an idea that was discussed in the article. For each poem identify words/phrases from the article that support the perspective of the poet?

   _____
   _____
   _____
   _____
   _____
   _____

IM2 – Week of May 4th

Law of Cosines

Which One Doesn't Belong? Why?



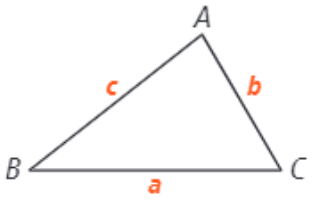
CONCEPT Law of Cosines

For any $\triangle ABC$, the **Law of Cosines** relates the cosine of each angle to the side lengths of the triangle.

$$a^2 = b^2 + c^2 - 2bc \cos A$$

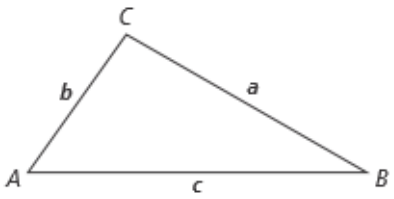
$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$c^2 = a^2 + b^2 - 2ab \cos C$$



Law of Cosines Worksheet 1

1. Complete the definition of the Law of Cosines.



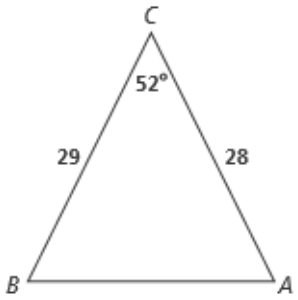
Given a triangle, the length of a side is related to the cosine of the opposite angle and the lengths of the two other sides. For any $\triangle ABC$ with angles A, B, and C and opposite side lengths a, b, and c, you have the following relationships.

$a^2 =$ _____ $- 2bc \cos$ _____

$b^2 =$ _____ $- 2ac \cos$ _____

$c^2 =$ _____ $- 2ab \cos$ _____

2. William attempts to find the value of AB by applying the Law of Cosines. What is his error? Find the correct value of AB. Round to the nearest whole number.

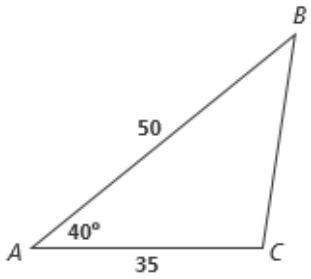


$(AB)^2 = 29^2 + 28^2 + 2(29)(28) \cos 52°$

$(AB)^2 \approx 2{,}625$

$AB \approx 51.2$

3. What is BC? Round to the nearest tenth.



Given information:

$m\angle A$ opposite BC is _____.

Length of $\overline{AB}$ is _____.

Length of $\overline{AC}$ is _____.

Use the Law of Cosines.

$(BC)^2 =$ (_____)$^2 +$ (_____)^2

$-$ _____ (50)(35) cos _____

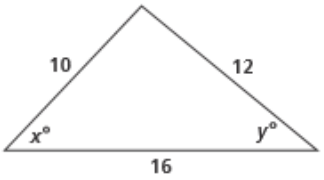
$(BC)^2 \approx$ _____

$BC \approx$ _____

Law of Cosines Worksheet 2

For Exercises 1–4, use the Law of Cosines to find the values of *x* and *y*. Round to the nearest tenth.

1.



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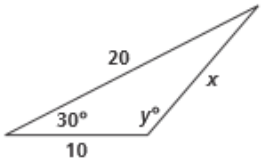

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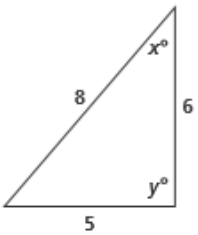
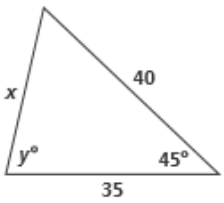


4.



5. William calculated the measure of the largest angle for a triangle with sides 8, 11, and 13. What mistake did he make? What is the correct angle measure?

$c^2 = a^2 + b^2 - 2ab \cos C$

$8^2 = 13^2 + 11^2 - 2(13)(11) \cos C$

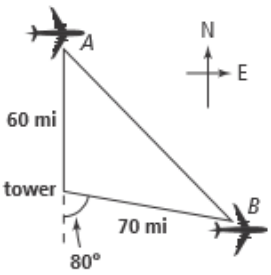
$64 = 169 + 121 - 286 \cos C$

$64 - (169 + 121) = -286 \cos C$

$\frac{226}{286} = \cos C$

$m\angle C \approx 37.8°$

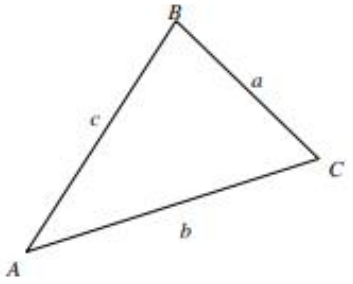
6. Two planes are flying at the same altitude. One airplane is 60 miles due north of the control tower. Another airplane is located 70 miles from the tower at a heading of 80° east of south. To the nearest tenth of a mile, how far apart are the two airplanes?



Students have several tools for finding parts of right triangles, including the Pythagorean Theorem, the tangent ratio, the sine ratio, and the cosine ratio. These relationships only work, however, with *right* triangles. What if the triangle is not a right triangle? Can we still calculate lengths and angles with trigonometry from certain pieces of information? Yes, by using two laws, the Law of Sines and the Law of Cosines that state:

Law of Sines

$$\frac{\sin(m\angle A)}{a} = \frac{\sin(m\angle B)}{b}$$
$$\frac{\sin(m\angle B)}{b} = \frac{\sin(m\angle C)}{c}$$
$$\frac{\sin(m\angle A)}{a} = \frac{\sin(m\angle C)}{c}$$



Law of Cosines

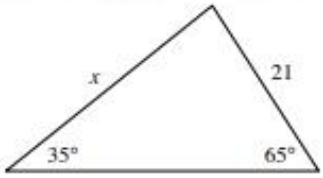
$$c^2 = a^2 + b^2 - 2ab\cos C \qquad b^2 = a^2 + c^2 - 2ac\cos B \qquad a^2 = b^2 + c^2 - 2bc\cos A$$

See the Math Notes boxes in Lessons 5.3.2 and 5.3.3.

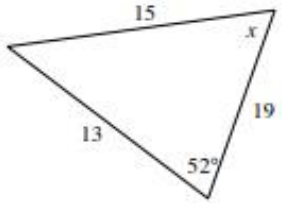
Example 1

Using the Law of Sines, calculate the value of x.

a.



b.



We will set up ratios that are equal according to the Law of Sines. The ratio compares the sine of the measure of an angle to the length of the side opposite that angle. In part (a), 21 is the length of the side opposite the 35° angle, while x is the length of the side opposite the 65° angle. The proportion is shown at right. To solve the proportion, we cross multiply, and solve for x. We can use the Law of Sines to find the measure of an angle as well. In part (b), we again write a proportion using the Law of Sines.

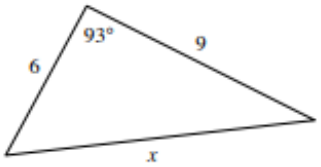
$$\frac{\sin 35°}{21} = \frac{\sin 65°}{x}$$
$$x\sin 35° = 21\sin 65°$$
$$x = \frac{21\sin 65°}{\sin 35°}$$
$$x = 33.18$$

$$\frac{\sin x}{13} = \frac{\sin 52°}{15}$$
$$15\sin x = 13\sin 52°$$
$$\sin x = \frac{13\sin 52°}{15}$$
$$\sin^{-1} x = 13\sin 52° \div 15$$
$$x = 43.07°$$

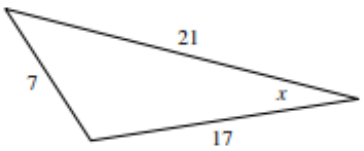
Example 2

Use the Law of Cosines to solve for x in the triangles below.

a.



b.



The Law of Cosines does not use ratios, as the Law of Sines does. Rather, it uses a formula somewhat similar to the Pythagorean Theorem. For part (a) the formula gives us the equation and solution shown below.

$$x^2 = 6^2 + 9^2 - 2(6)(9)\cos 93°$$
$$x^2 = 36 + 81 - 108(-0.052)$$
$$x^2 = 117 + 5.612$$
$$x^2 = 122.612$$
$$x = 11.07$$

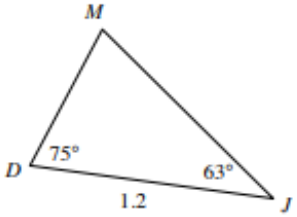
Just as with the Law of Sines, we can use the Law of Cosines to find the measures of angles as well as side lengths. In part (b) we will use the Law of Cosines to find the measure of angle x. From the law we can write the equation and solution shown below.

$$7^2 = 17^2 + 21^2 - 2(17)(21)\cos x$$
$$49 = 289 + 441 - 714\cos x$$
$$49 = 730 - 714\cos x$$
$$-681 = -714\cos x$$
$$\frac{-681}{-714} = \cos x$$
$$x = 17.49° \text{ (using } \cos^{-1} x)$$

Example 3

Marisa's, June's, and Daniel's houses form a triangle. The distance between June's and Daniel's houses is 1.2 km. Standing at June's house, the angle formed by looking out to Daniel's house and then to Marisa's house is 63°. Standing at Daniel's house, the angle formed by looking out to June's house and then to Marisa's house is 75°. What is the distance between all of the houses?

The trigonometry ratios and laws are very powerful tools in real world situations. As with any application, the first step is to draw a picture of the situation. We know the three homes form a triangle, so we start with that. We already know one distance: the distance from June's house to Daniel's house. We write 1.2 as the length of the side from D to J. We also know that $m\angle J = 63°$ and $m\angle D = 75°$, and can figure out that $m\angle M = 42°$. We are trying to find the lengths of $\overline{DM}$ and $\overline{MJ}$. To do this, we will use the Law of Sines.



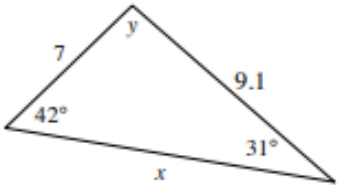
MJ:
$$\frac{\sin 75°}{MJ} = \frac{\sin 42°}{1.2}$$
$$1.2\sin 75° = (MJ)\sin 42°$$
$$\frac{1.2\sin 75°}{\sin 42°} = MJ$$
$$MJ = 1.73 \text{ km}$$

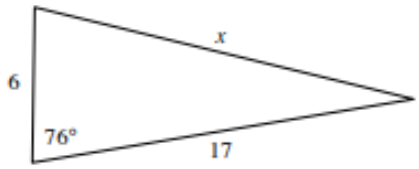
DM:
$$\frac{\sin 63°}{DM} = \frac{\sin 42°}{1.2}$$
$$1.2\sin 63° = (DM)\sin 42°$$
$$\frac{1.2\sin 63°}{\sin 42°} = DM$$
$$DM = 1.60 \text{ km}$$

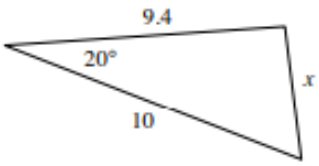
Therefore the distances between the homes are: From Marisa's to Daniel's: 1.6 km, from Marisa's to June's: 1.73 km, and from Daniel's to June's: 1.2 km.

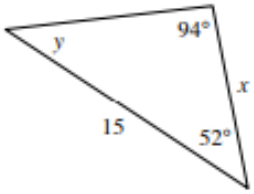
Problems

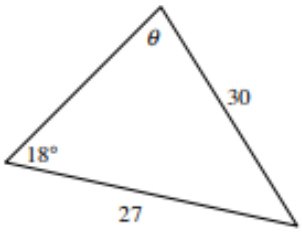
Use the tools you have for triangles to solve for x, y, or θ. Round all answers to the nearest hundredth.

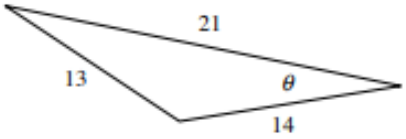
1. 

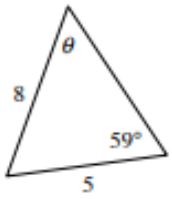
2. 

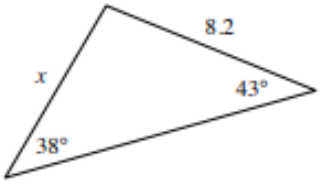
3. 

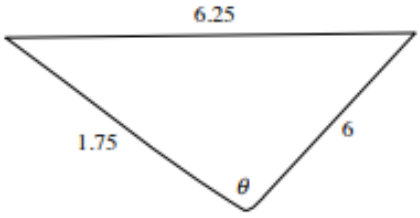
4. 

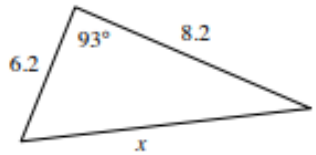
5. 

6. 

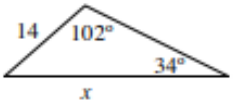
7. 

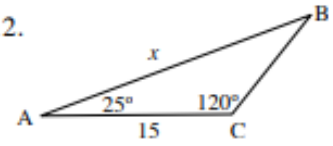
8. 

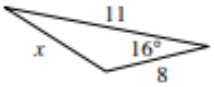
9. 

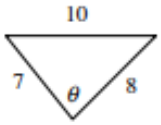
10. 

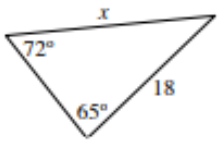
Use the Law of Sines or the Law of Cosines to find the required part of the triangle.

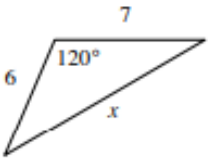
11. 

12. 

13. 

14. 

15. 

16. 

Draw and label a triangle similar to the one in the examples. Use the given information to find the required part(s).

17. $m\angle A = 40°, m\angle B = 88°, a = 15.$
Find b.

18. $m\angle B = 75°, a = 13, c = 14.$
Find b.

19. $m\angle B = 50°, m\angle C = 60°, b = 9.$
Find a.

20. $m\angle A = 62°, m\angle C = 28°, c = 24.$
Find a.

21. $m\angle A = 51°, c = 8, b = 12.$
Find a.

22. $m\angle B = 34°, a = 4, b = 3.$
Find c.

23. $a = 9, b = 12, c = 15.$
Find $m\angle B$.

24. $m\angle B = 96°, m\angle A = 32°, a = 6.$
Find c.

25. $m\angle C = 18°, m\angle B = 54°, b = 18.$
Find c.

26. $a = 15, b = 12, c = 14.$
Find $m\angle C$.

27. $m\angle C = 76°, a = 39.$ B = 19.
Find c.

28. $m\angle A = 30°, m\angle C = 60°, a = 8.$
Find b.

29. $a = 34, b = 38, c = 31.$
Find $m\angle B$.

30. $a = 8, b = 16, c = 7.$
Find $m\angle C$.

31. $m\angle C = 84°, m\angle B = 23°, c = 11.$
Find b.

32. $m\angle A = 36°, m\angle B = 68°, b = 8.$
Find a and c.

33. $m\angle B = 40°, b = 4,$ and $c = 6.$
Find $a, m\angle A$, and $m\angle C$.

34. $a = 2, b = 3, c = 4.$
Find $m\angle A$, $m\angle B$, and $m\angle C$.

35. Marco wants to cut a sheet of plywood to fit over the top of his triangular sandbox. One angle measures 38°, and it is between sides with lengths 14 feet and 18 feet. What is the length of the third side?

36. From the planet Xentar, Dweeble can see the stars Quazam and Plibit. The angle between these two sites is 22°. Dweeble knows that Quazam and Plibit are 93,000,000 miles apart. He also knows that when standing on Plibit, the angle made from Quazam to Xentar is 39°. How far is Xentar from Quazam?

Meet the Ologist: Eleanor Sterling

by American Museum of Natural History

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.

Image Credit: courtesy of Denis Finnin, AMNH

Eleanor in front of the Museum's Hall of Biodiversity

What do you do?

Eleanor Said: I am the Director of the Center for Biodiversity and Conservation at the American Museum of Natural History in New York. It's my job to find ways to make the science that happens here at the Museum useful to people involved in biodiversity all over the world. I've met with people in Vietnam, Bolivia, Madagascar, Guatemala, and Cuba.

I talk to people: government officials, university professors, park officials, people who live in or near parks. Together we look at the overall threats to their biodiversity and decide on the best places to put aside as protected areas.

Image credits: courtesy of AMNH.

Compared to the continent of Africa, Madagascar may seem small. But this island, the fourth largest in the world, is bigger than California and Oregon combined. It lies in the Indian Ocean about 250 miles off the southeast coast of Africa. Many of the plants and animals that live on Madagascar are found nowhere else in the world.

In college, I majored in language but I also studied both anthropology and science. Through anthropology I learned about people's customs and needs. Science taught me how to come up with solutions to help the environment. In my work, I try to balance both.

Image credits: Eleanor Sterling; Eleanor Sterling: courtesy of AMNH.

Eleanor Sterling is the Director for the Center for Biodiversity and Conservation at the American Museum of Natural History. Eleanor is a scientist who works with people all over the world to help find ways to conserve nature and biodiversity. She has also spent years in Madagascar studying the aye-aye, a mysterious primate that comes out only to feed at

How did you become interested in studying languages?

Eleanor Said: When I was little, my dad and I went to a concert where people sang songs in different European languages. I was so impressed when he could translate all the songs for me.

It made me determined to understand other languages, and it inspired me to study French, German, and Spanish

night.

in high school. I also studied Latin, which not only helps you understand English better but is also the language of science-all scientific names of animals and plants are in Latin. In college I learned Russian and since then I've taught myself Swahili and Malagasy and I'm working with a tutor to learn Vietnamese.

Languages help you better understand how other people think and to reach out to people from other cultures. Knowing all these languages opens doors for me; people appreciate that I try to learn their language instead of expecting them to know mine.

Image credits: AMNH, spectrum of life in Hall of Biodiversity; Eleanor Sterling: courtesy of AMNH.

Scientists have identified over 1.75 million species on Earth -- over one million of them are insects and spiders. There are many more yet to be identified! All living things are dependent upon one another for survival. This variety of life on Earth -- and its interdependence -- is called biodiversity.

So what is Biodiversity, anyway?

Eleanor Said: Biodiversity is the living part of the environment. It encompasses both organisms and the interactions between organisms. You can't just look at one species without thinking about the whole environment.

Image Credit: AMNH

Can you describe this elephant?

Do you know the story about the blindfolded man who tried to describe an elephant just by feeling its trunk? Of course, he couldn't do it without knowing about its legs, body, tail, and ears. The environment is like that: everything is interconnected, and to understand how it works, you have to consider everything in it.

Everything in the environment is interconnected. What does this really mean?

Eleanor Said: Sixty years ago, Aldo Leopold changed the way everyone thought. He said that nature was complicated and compared it to a watch that works well. At first it might seem like what you see is what's important. But it's the way the watch parts that you don't see work together that makes the whole watch work so well.

Another person who was very important, Rachel Carson, made people think about how anything we add to our environment, like pesticides, has an effect.

They're both people who changed the world by changing the way we think. Both were passionate about their work.

Living things depend on each other to survive. They're all connected in a web of life.

I tell my students that they too can make a difference if they work hard and convince others with their passion and depth of knowledge.

Did you like science in school?

Eleanor Said: I was interested in science in school, but it always surprised me when I did well in chemistry, or math because, as a girl, I never assumed I'd do well in those subjects. I didn't mind taking science classes and learning about anatomy and chemistry but I was always more interested in the bigger picture of how animals behaved and how ecosystems worked. I realized as I got older that everything I learned in school provided me with the tools to tackle the big questions like: How can we help the environment?

Image Credit: courtesy of Center for Biodiversity and Conservation, AMNH

Skills learned in school help Eleanor when she's out in the field.

Do you think girls who are interested in science have a harder time than boys?

Eleanor Said: Even today, girls face challenges. When most people think of scientists, they think of men. Women scientists in the United States are still a minority. I was very lucky when I was young. My parents, teachers, and counselors were always careful to encourage me to pursue any career that I wanted: scientist, doctor, or lawyer.

But there was one thing that was an obstacle: participating in sports. When I was a girl, the most extreme sport for girls was basketball. I wanted to run. To do this I had to join the boys' running team, but that didn't stop me. I was the only girl on the team, and boys would huff and puff trying to beat me in races. When I won, many of the boys felt badly because a girl had beaten them.

Image Credit: courtesy of Center for Biodiversity and Conservation, AMNH

Eleanor is athletic. It comes in handy when she's working in remote places.

Image Credit: courtesy of Center for Biodiversity and Conservation, AMNH

When people first meet you, are they surprised that you're a woman?

Eleanor Said: Sometimes, yes! They don't expect to see a woman in a position like mine; they automatically assume that people in positions of authority are men.

I never stamp my foot and act like I'm the boss. It takes patience and cultural understanding to know why people feel the way they do.

Working with people to encourage understanding and acceptance is an important part of Eleanor's work.

When I travel, I rely on my colleagues from other institutions to help me in these situations. But in some countries-Vietnam, for instance-many of the scientists I work with are women.

When did you first become interested in the environment?

Image Credit: AMNH

Growing up in California gave Eleanor plenty of chances to observe sea life.

Eleanor Said: I grew up in northern California in a neighborhood where houses had solar panels to make their own electricity. The nearby streets only had one lane to encourage people to ride bikes instead of driving their cars. I always loved animals, and my mom and dad took us to places like Monterey and Big Sur, where we'd watch the sea lions. We'd go on camping trips to a dwarf pine forest and see how the local geology affected how the trees grew.

My sixth-grade teacher was my earliest inspiration. She showed films about animals and nature and took us on field trips. After one class trip to a veal-producing farm, I became a vegetarian. The main thing this teacher taught us was that we all make choices that affect the world around us.

When you got older, did anyone inspire you?

Eleanor Said: I was majoring in language in college. To meet college requirements I went along with a friend to a physical anthropology class and had an unexpected experience that changed my life!

Nothing I'd experienced before in school had prepared me for the professor, Dr. Alison Richard. She was teaching about Madagascar and jumped up on stage to show us how a lemur goes through the forest-she acted out its movements and behavior. I was so mesmerized by this professor and her performance that I took as many classes as possible with her.

I eventually realized that this was what I wanted to do with my life: not study language but go to Madagascar and study lemurs. I feel lucky that I had such a smart teacher.

You also teach. Is this something you always wanted to do?

Image Credit: AMNH

Eleanor now teaches at Columbia University.

Eleanor Said: I am obsessed with reading and have been since I was a kid. I would read comics, seed catalogues, anything really, though I especially liked historical fiction and history. I was so obsessed that I brought a book to read when I went out to dinner with my family-in case the food took a long time to arrive!

I always wanted to teach. At first I wanted to teach primary school, then middle school, and then, when I got older, I wanted to teach teachers. These days I teach at Columbia University in New York, which I enjoy because students ask questions that make me think of things I hadn't thought of before. I encourage students to ask questions and to understand that there is often no single right answer to a question.

How did you decide what to study?

Eleanor Said: After I finished college, I worked for the World Wildlife Fund, where I discovered that few scientists had ever studied an endangered primate from Madagascar called the aye-aye. In college, my professors used the aye-aye as the exception to almost every rule about primates. I liked that. I became determined to go to graduate school and study the aye-aye.

So I went to Madagascar. I worked with field assistants. It took us five months to get a radio collar on an aye-aye and another month for the aye-aye to get used to us. We all played "Red Light, Green Light." The aye-aye would look at us, then look away, and we would scramble closer. The game kept up until we were near enough to watch him closely with binoculars.

Image credits: courtesy of Duke University Primate Center.

In the wild, ruffed lemurs live in only one place -- the eastern rain forests of Madagascar. Lemurs are prosimians, which means they belong to a group of primates that existed for millions of years, long before monkeys, apes, or humans appeared. Lemurs are endangered because their habitat is being destroyed and also because people hunt them for food.

Image Credit: courtesy of AMNH Department of Library Services, #K14396

What's so exciting about fieldwork?

Eleanor Said: During college I spent a lot of time at the San Diego Zoo. That's what gave me the idea of working with primates in the wild. I wrote lots of letters to people with whom I thought it would be cool to work. I got

accepted as a field assistant on a project studying baboons and went to Tanzania for a year.

Before Eleanor studied aye-ayes she studied baboons, which are also primates.

The most rewarding and intense adventures in my life have occurred during fieldwork. One time in Madagascar we were sitting under a tree in pitch black in the middle of the night waiting for an aye-aye to come out of its nest. Suddenly, out of nowhere, a mass of fireflies began to dance, circling round in the air. The 25-minute natural fireworks show those fireflies put on was one of the most beautiful sights I have ever seen.

Do you have any advice for kids interested in doing fieldwork?

Image Credit: courtesy of Center for Biodiversity and Conservation

Living in a tent is something you need to get used to when you're doing fieldwork.

Eleanor Said: I really advise anyone interested in fieldwork to try it first to make sure that it's what you want to do. Often people have a romantic idea about it, but the truth is, it isn't very glamorous.

You travel long distances to go to fairly remote places where you live in a tent and spend many hours in the freezing cold or sweltering heat waiting for an animal to do something. Sometimes it's so cold that you can't even take a sponge bath-assuming, that is, that there is enough water for one.

Though a lot of people find the experience frightening, I have to admit I find it exciting. Fieldwork is a kind of detective work that requires lots of patience.

What have you discovered about aye-ayes?

Image Credit: AMNH, courtesy of Eleanor Sterling

An aye-aye bit into these pieces of fruit.

Eleanor Said: People used to think that aye-ayes ate only insects, but they also eat fruit. We discovered their secret after I realized the aye-aye was eating something and then throwing it down from the trees.

The fruit the aye-aye eats is oval-shaped. It has an outer covering with a hard nut inside. We watched as the aye-aye used his front teeth to slice into the top of the outer covering. After he had finished with it, the top had slits all the way around, like an umbrella, and the nut was exposed. The aye-aye made a hole in the nut with his teeth and scraped out the nut meat using his third finger, throwing the rest of the fruit down from the tree on top of my head!

How have your discoveries helped aye-ayes?

Eleanor Said: We learned that aye-ayes live in more places in Madagascar than we thought. But we still don't know exactly how many live in any one place. So the aye-aye is still listed as an endangered species.

When we figured out how aye-ayes ate, we could count how many fruits they ate in one day. Back in the lab, we analyzed their food to figure out exactly what they were eating.

We then passed this valuable information about the aye-aye's diet along to people who look after aye-ayes in captivity. Figuring all of this out was one of the most amazing discoveries of my life.

Image Credit: AMNH, courtesy of Eleanor Sterling

Learning about the aye-aye's diet gave Eleanor a way to help aye-ayes in captivity.

You've spent hours observing aye-ayes. What kind of cool tricks have you seen?

Eleanor Said: Once, from way up close, I watched an aye-aye tap along a log, listening carefully for echoes. When he heard an echo, he would follow the hollow section until there was no more echo.

Then he would rip that part of the log open with his teeth and scoop out an immense beetle larva. Holding it in his hand as if it were an ice cream cone, he would eat it up, licking around the outside of his hand without wasting a single drop. I never saw him eat adult beetles, only the larvae.

Image Credit: AMNH, Hall of Biodiversity

The aye-aye's long fingers and powerful teeth help it enjoy a delicious meal.

Another time I saw an aye-aye throwing something in the air and then tipping his head back to catch it in his mouth. The aye-aye had found a trail of ants and was flipping them into his mouth, one at a time, as if they were pieces of popcorn.

Image Credit: courtesy of AMNH Department of Library Services, K15531

A crested argus looks a bit like a peacock.

What kind of equipment do you use in your work?

Eleanor Said: We use radio collars to track animals, and, in Vietnam, we use camera traps, which send out beams of light. We put them in the forest, in the places where the animals come out at night. Animals trip the beam, and the camera takes a picture.

In Vietnam there is a beautiful bird called the crested argus. They look like peacocks, with beautiful, five-feet-long tails. We put the cameras in a depression in the forest where we thought the males would do a courtship dance.

When we came back, we discovered that all the film was used up. Imagine how excited we were when the film was developed-we had phenomenal pictures that have helped us understand the behavior patterns of this species of bird.

How have you worked with people in Madagascar?

Eleanor Said: I was in graduate school when I went to study the aye-aye in Madagascar. At the time, science teachers in Madagascar asked me why I didn't study the aye-aye in the U.S. They had no idea that this animal was unique to their country.

After I finished graduate school, I decided to go back to Madagascar to share what I'd learned with people there. The science in many of the textbooks was out-of-date and was not relevant to the biodiversity or culture of Madagascar. I worked as a volunteer on a project, putting together teaching materials about Madagascar wildlife and plants for teachers.

Image credits: courtesy of AMNH.

Map of Madagascar

Image credits: Eric Hamilton; Eleanor Sterling: courtesy of AMNH.

Remember, if you want to help the environment, "reduce, reuse and recycle." Want to turn something old into something new? Recycle the materials that you use every day, reduce the amount of stuff that you throw away, and use it over again! Instead of throwing old newspapers, cans, and bottles into a dump, you can recycle them or use them again to create something else. The less you use and the more you reuse, the better off the environment will be.

What can kids do to help

Image credits: montage of Silver sword, AMNH and Bald Eagle, courtesy of AMNH, Department of Library Services 1118.

Thousands of plants and animal species may be in danger of becoming extinct and disappearing forever. Some endangered species include giant pandas, tigers, and the silver sword plant, which is found only on the Hawaiian islands. Many species are threatened because of human actions. But by creating laws to preserve natural habitats, we may be able to save some of them.

biodiversity?

Eleanor Said: Think before you buy. Do you want something because you need it, or because you saw it on TV? Buy fewer things, but buy better quality so they will last longer. "Reduce, Reuse, and Recycle Recycle" is a good motto if you want to help the environment.

Do not let any of your pets loose in the wild to live. They probably will not survive, and they may threaten other plants and animals that live there too. Also, before you buy a pet, make sure it's not an endangered species. It's illegal to own endangered animals, but sometimes people in this country buy

them by mistake. Make sure you're informed.

Image credits: European starling, courtesy of Dr. W. Dan Sudia, FLMNH Photo Gallery of Southeastern U.S. Birds African land snail, courtesy of Duane Meier, Honolulu Zoo, Wicked Willy photo gallery cat, courtesy of AMNH.

An invasive species is a living thing that moves into a new region. Species often become "invasive" as a result of human activities. Invasive species can threaten local plants and animals by competing with them for resources. Sometimes this can lead to the extinction of native species. Once invasive species become established, they can greatly change a habitat.

You could volunteer in a neighborhood program that helps get rid of invasive plants-plants that get out of control, take over, and push other plants out.

Do you have to be a scientist to work on biodiversity?

Image Credit: AMNH

Joshua Tree National Park in California

Eleanor Said: No, you don't. All it takes is passion and determination. You could become a teacher and work in environmental education-helping people to think about the issues that affect biodiversity. Or you might consider working in a zoo, an aquarium, a botanical garden, a museum, a science center, a national park, or for organizations like the Wildlife Conservation Society or the U.S. Fish and Wildlife Service. You can learn about the kinds of things that might interest you by working on conservation projects during the summer.

Image credits: courtesy of George B. Schaller.

The Tibetan antelope, also known as "chiru," is one of the most beautiful mammals in the world. Its thick, woolly, cream-colored coat provides needed protection against the cold Tibetan winters. Unfortunately, people pay thousands of dollars for scarves made from these coats to keep warm, too. It's illegal to buy or sell anything made from Tibetan antelope fur.

How do you feel about the future?

Eleanor Said: I'm an optimist. You definitely have to have a positive attitude to work in this field. I think people will continue to figure out ways to live more in harmony with their environment. We'll learn how to consider our environment when we make choices about things we buy and where and how we live.

In many countries, people are becoming more aware of their natural resources. Often this is a question of survival. In this country, it's more a question of learning to want fewer of the things that harm the environment. If we all think more carefully about the way we live and the things we buy, together we can make a difference.

Woodrow Wilson's Stroke

Benchmark Standard	Civics 2b: Students will understand that the functioning of the American government is a dynamic process which combines the formal balances of power incorporated in the Constitution with traditions, precdents, and interpretations which have evolved over time.
Grade	10
Vocabulary / Key Concepts	25th Amendment

This Lesson is by Fran O'Malley for the University of Delaware Biden School of Public Policy and Administration
~The lesson is modified by CSD for use at home~

ACTIVITY 1:
INTRODUCTION:

No fewer than six Presidents including Lincoln, Garfield, Wilson, Franklin Roosevelt, Eisenhower and Lyndon Johnson have been so disabled for varying lengths of time that they could not carry on the duties of their office. By analyzing and deciding the most prolonged case of Presidential illness, that of Woodrow Wilson, you will arrive at an understanding of the complexities in attempting to declare the disability. The need for the 25th Amendment will also be realized. You will read the re-enactment the actual events surrounding President Woodrow Wilson's incapacitating stroke. Then, acting as a modern day Cabinet, you will be asked to decide the case of Wilson's disability in accordance with the provisions of the 25th Amendment, which was ratified in 1967.

1. Do you think there are any circumstances, other than "high crimes" or "misdemeanors" that would justify and necessitate relieving a President of his powers and duties? If so, what might these circumstances be?
2. Do you think a disability might justify relieving a President of his powers and duties? Explain why or why not.

HANDOUT 1
"ARTICLE II AND PRESIDENTIAL DISABILITY"

Article II, Section 1, Clause 6:
Death, Removal, or Inability of President to Serve

"In case of the Removal of the President from office, or of his death, resignation, or inability to discharge the powers and duties of the said office, the same shall devolve on the Vice-President, and the Congress may by law provide for the case of removal, death, resignation, or inability, both of the President and Vice President, declaring what officer shall then act as President, and such officer shall act accordingly, until the disability be removed, or a President shall be elected."

Discussion Questions: On a separate sheet of paper, answer the following questions based on your understanding of Article II.

1. Who assumes the duties or office of the President in the event of disability?
2. Who has the authority to certify the President's disability or inability?
3. What procedure must be followed in declaring Presidential disability or inability?
4. Did the founding Fathers choose to use two separate words ("disability" and "inability") to refer to two different conditions?
5. May the President's powers be removed only in the case of mental impairment or in cases of physical disability as well?
6. Does the officer upon whom Presidential powers and duties "devolve" become the President of the United States, or is he a temporary "Acting President" only?
7. For what length of time does the officer upon whom presidential powers and duties devolve, serve in his role as President?
8. May a "disabled" or "inable" President be declared "able" again? If so, by what means?
9. Does the President himself have any role in deciding his own disability?
10. Must a disability exist for a certain length of time before a President's powers and duties can be removed, or is the duration of a disability not a consideration?

SIDE NOTE regarding the above questions:

1. How affirmative were you able to answer the above questions? Do you have confirmed answers or did it just leave you with more questions?
2. The vagueness of this clause probably left you with a lot of uncertainty. This confused state of mind probably placed you in a quandary comparable to that in which Wilson, his advisers, and Congress found themselves in 1919.

ACTIVITY 2:

Re-enactment:

Read about a retelling of actual events which took place in 1919 and 1920 when President Wilson suffered a serious stroke and was recuperating from it (below, Handout 2). The entire script is based on the testimony of those whose roles they will be playing, as well as on the research of historians and medical experts.

HANDOUT 2
"WOODROW WILSON SUFFERS A STROKE"
(RE-ENACTMENT)

The Characters: (in order of appearance)

Rear Admiral Cary T. Grayson – President Wilson's personal physician and trusted friend.
Woodrow Wilson – President of the United States from 1913 until 1921.
Edith Bolling Wilson – the President's caring and protective (second) wife.
David F. Houston – Wilson's Secretary of Agriculture.
Thomas R. Marshall – Wilson's Vice-President. He showed signs of anxiety when the seriousness of Wilson's condition and the topic of succession were discussed.
Robert Lansing – Wilson's Secretary of State who raised the issue of disability on more than one occasion and, partly as a consequence, was dismissed by Wilson early in 1920.
Joseph P. Tumulty – The President's personal secretary and trusted friend. Tumulty was part of the "bedroom circle" (which included Mrs. Wilson and Dr. Grayson) that guarded the President after his stroke.
Senator Albert Fall – Republican Senator from New Mexico. Fall was a political foe and critic of the President.
Dr. Francis X. Dercum – Neurologist who served as a medical consultant for the Wilsons.

The Script

Narrator: On September 25, 1919, while on a national speaking tour in which he was attempting to rally support for the Treaty of Versailles and U.S. participation in the League of Nations, President Woodrow Wilson fell ill in Wichita and was forced to cancel the rest of his trip. His close friend and personal physician, Cary T. Grayson, initially informed executive aides that "The President has suffered a complete nervous breakdown." Later, he released the following statement:
Dr. Grayson: (addresses the class) "President Wilson's condition is due to overwork. The trouble dates back to an attack of influenza last spring in Paris from which he has never entirely recovered. The President's activities on this trip have overtaxed his strength and he is suffering from nervous exhaustion. It will be necessary for his recovery that he has rest and quiet for a considerable time."
Narrator: The President arrived back in Washington on Sunday, September 28. Suffering from constant and throbbing headaches, he could not read, work or sleep. The First Lady, Edith Bolling Wilson, rose often during the course of each night to check on the President. At about 8:00 a.m. on October 2nd, Mrs. Wilson found the President sitting on the side of the bed trying to reach for a water bottle.
*Scene (The President sitting on the bed…one hand holding his head, the other reaching for a water bottle. Mrs. Wilson gets the bottle for her husband.)
President Wilson: "I have no feeling in my left hand. Will you rub it? But first, help me to the bathroom."
*Scene (Mrs. Wilson helps the President into the bathroom.)
Mrs. Wilson: "I'm going to call Dr. Grayson. Will you be all right for a few minutes?"
President Wilson: (feebly responds) "Yes"
*Scene (Mrs. Wilson leaves the room. The President falls unconscious to the floor, making a loud noise. Mrs. Wilson rushes back into the room.)
Mrs. Wilson: "Oh, my God!"
*Scene (Mrs. Wilson grabs a blanket, covers the President, and places a pillow under his head. She then closes the door to the bedroom. Dr. Grayson arrives, finds the door locked, knocks and is admitted. The President is cut on his nose and temple. Together, Mrs. Wilson and Dr. Grayson help the President into bed. Dr. Grayson walks away from the bed, turns to the class and says…)
Dr. Grayson: "My God, the President is paralyzed!"
Narrator: In the days that followed, the President remained bed-ridden as his condition got worse. Absolute rest was ordered. Mrs. Wilson, Dr. Grayson and the President's personal secretary, Joseph Tumulty, shielded the President from any work and agitation. Visitors were not permitted (not even the Vice-President or Cabinet members). The seriousness of the President's condition was revealed to few people. On Sunday, October 5, Tumulty spoke in confidence to Josephus Daniels, the Secretary of the Navy, and David Houston, the Secretary of Agriculture. Both were shaken by the news that Wilson had suffered a serious stroke and that his left side was paralyzed. Secretary Houston met with Vice-President Thomas R. Marshall that afternoon for lunch.
*Scene (Houston and Marshall eating lunch)

Marshall: "Tell me, David, how bad is it?"
Secretary Houston: "I know very little except that the President is a very sick man. I cannot reveal much."
Vice-President Marshall: (appearing very nervous) "If anyone should know what's going on it should be me. Dr. Grayson has no right keeping me in the dark. I have not been well informed of the affairs of this administration and it would be a great tragedy for this nation if I were to assume the President's duties without warning."
Houston: "There is nothing more I can say."
Marshall: "I do not like the situation in which I find myself. I'll tell you one thing…I'm not going to be the one to usurp the President's authority. I'll not expose myself to the wrath of a woman, especially if she is the wife of the President of the United States."
Narrator: Concerns about the health of the President and his ability to function as President led to the calling of a Cabinet meeting by Secretary of State Robert Lansing. Prior to the meeting, which was held on Monday, October 6, Secretary Lansing met with Joseph Tumulty and Dr. Grayson, both of whom had been keeping a close eye on the President. The sensitive issue of disability was raised.
*Scene (Lansing talking to Tumulty and Grayson, who get more and more defensive)
Secretary Lansing: "In view of the President's condition, I think it necessary to consider placing the duties of the President in the hands of Vice-President Marshall. I brought a copy of the Constitution and would like your thoughts on the matter." (Lansing reads from the Constitution)
"In case of the Removal of the President from office,…or inability to discharge the powers and duties of the said office, the same shall devolve on the VicePresi…"'
Tumulty interrupts: "Mr. Lansing, the White House is well aware of the Constitution. I have read it and do not find myself in need of any tutoring at your hands on the provision you have just read. T ell me something, however. Who has the authority to determine whether or not the President is disabled?"
Lansing: (pauses and in an uncertain fashion responds) "That decision would have to be made by you or Dr. Grayson, I suppose."
Tumulty: "Well, as long as the President is in his sickbed, I'll not be a party to ousting such a kind, loyal and wonderful friend. (Tumulty turns to Dr. Grayson and asks) Doctor…what are you thoughts."
Grayson: "I will not be a party to the President's removal."
Tumulty: "And rest assured that we will stand together if anyone outside of the White House tries to certify the President's disability."
Narrator: Secretary Lansing brought up the issue of disability again at the Cabinet meeting the next day.
*Scene (Lansing meeting with Secretary Houston and the rest of the Cabinet. Lansing should face the class as if they are the Cabinet)
Secretary Lansing: "If Wilson is unable to attend to the affairs of government, Vice-President Marshall should act as President."
Secretary Houston: "We really need to know more about the President's condition. Send for doctor Grayson."
*Scene (Lansing goes to get Dr. Grayson and returns with him)
Secretary Houston: "Dr. Grayson, what can you tell us?"
Dr. Grayson: "The President's condition is touch and go. He should be bothered as little as possible. Any excitement may kill him. At this very moment he is already quite irritated by the fact that his Cabinet is meeting without his authority.
Narrator: After hearing about the President's irritated state, the subject of disability was quickly dropped. Nine days after his stroke it was announced that the President would not be allowed to leave his bed for an extended period of time. Thereafter, the President's "bedroom circle" (Grayson, Tumulty and Mrs. Wilson) closed ranks to protect the President from what they judged to be detrimental to his recovery. Admittedly, Mrs. Wilson decided which matters would be brought before the President for his consideration after consulting with the doctors.
*Scene (Tumulty delivering letters to Mrs. Wilson)
Tumulty: "Mrs. Wilson, I have been asked to deliver these letters to the President."
Mrs. Wilson: (looks over the envelopes…discusses a few with Dr. Grayson…sets some aside, and while walking towards the President's bedroom says) "Let me see how he is today."
*Scene (Mrs. Wilson leaves the classroom and returns a moment later)
Mrs. Wilson: (while handing over envelopes to Tumulty) "Here, Joseph. Please deliver these responses from the President."
Narrator: Over 30 years later, unopened letters to the President were found and read for the first time. The confusion and frustration which resulted from the protective wall which had been built around the President led to angry accusations about the decision making process at the White House. A particularly scathing remark was made by Senator Albert Fall, a Republican critic of the President.
*Scene (Senator Fall angrily addresses the class)
Senator Fall: "We have no President. We have a petticoat government! Wilson is not acting. Mrs. Wilson is President. We have a President in petticoats!"
Narrator: The role played by Mrs. Wilson has been debated for years. In her personal memoir, written after the President's death, Mrs. Wilson recalled a conversation she had with Dr. Francis Dercum, a consulting neurologist.
*Scene (Mrs. Wilson conversing with Dr. Dercum)
Mrs. Wilson: "My husband's recovery cannot be hoped for unless he is released from every disturbing problem during these days in which nature repairs the damage which has been done. How can I protect him from these problems when the country looks to the President as leader?"

Dr. Dercum: "Madam, it is a grave situation but I think you can handle it. Have everything come to you; weight the importance of each matter, and see if it is possible to solve them without the guidance of your husband. Every time you excite him, you are turning a knife in an open wound."
Mrs. Wilson: "Then had he better not resign, let the Vice-President succeed to the Presidency and he himself get that complete rest that is so vital to his life?"
Dr. Dercum: "No, not if you are up to the task. For Mr. Wilson to resign would have a bad effect on the country and a serious effect on our patient. If he resigned with the Treaty not yet ratified, his greatest incentive to recovery is gone."
Mrs. Wilson: "Well, then doctor, I shall begin my stewardship. But, I will never make a single decision regarding the conduct of public affairs. I shall only decide what is important and what is not, and when to present matters to my husband, and when to withhold them."
Narrator: Thus emerged the rumors of a "Petticoat Presidency." Altogether, 180 days elapsed between Wilson's initial collapse and his attendance at his first Cabinet meeting on April 14, 1920. He did not get out of bed until the end of October (1919), and did not begin walking until after Christmas. During this period, only a handful of outsiders were permitted in to see the President. The first visitors, the King and Queen of Belgium, were received on October 31. Others included the Democratic minority leader, Senator Gilbert Hitchcock (a week later), the Prince of Wales (November 13), and Senators Hitchcock and Fall (December 15) who had actually been sent as the eyes of Congress. Vice-President Marshall saw Wilson for the first time in 1921 at the inauguration of the newly-elected President, Warren G. Harding. Those who did visit the President invariably attested to the clearness of the President's comments. It is not certain, however, whether Mr. Wilson was, at all times, so clear of mind. The President's partial recovery was very slow and gradual. As time passed, he became more active in the affairs of government. He did, however, miss 21 Cabinet meetings called by Secretary of State Lansing. Wilson also terminated his relationships with Lansing and with the wartime adviser, Colonel Edward House. Additionally, twenty-eight bills became law by default of any action on the part of the President. When the President finally did sign four bills into law on October 22, 1919, with the assistance of the First Lady, his signature was so illegible that a handwriting expert was hired to confirm its authenticity. On November 19, with the President still confined to his bedroom, the Treaty of Versailles was defeated in the United States Senate. Wilson has ordered Democratic Senators to reject any revisions in the Treaty even if such revisions were necessary for ratification. Worldwide pressure, some of which filtered through to the President, did not change the President's position. Although introduced in amended and original form again, the Treaty of Versailles was defeated, as were hopes for U.S. participation in the League of Nations. Some researchers have concluded that the stroke caused the President's thinking patterns to change, making it more unlikely for him to compromise. The President apparently denied some of the effects of his stroke, a condition common in stroke victims called agnosognosia, as well. It may be significant, however, to remember that the President himself did raise the issue of disability at one point. In Dr. Grayson's own memoirs, he recalled Wilson's comments which were brought up during the Treaty debates in the Senate.
*Scene (Wilson, in bed, speaking slowly to Grayson)
President Wilson: "I am seriously thinking about my duty to the country on account of my physical condition. My personal pride must not be allowed to stand in the way of my duty to my country. If I am only half-efficient I should turn the office over to the Vice-President. If it is going to take too much time for me to recover my health and strength, the country cannot afford to wait."
Narrator: Undeniably, President Wilson suffered a very serious stroke. The physical effects, including paralysis of the left side and impaired vision and speech, were real. The effects on the President's mental functioning are still being debated. One question remains to be considered: should Woodrow Wilson have been declared disabled, thereby permitting the duties of the office of the President to devolve upon Vice-President Marshall?

END

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Now that you have read the re-enactment, are you clear as to the procedures outlined in Article II for declaring disability?
Probably not. ☺

The Constitution was amended in 1967 (below, Handout 3) in an attempt to clarify the procedures for declaring disability and related issues.
Read the following "Sections" of the amendment and answer the questions that follow on a separate sheet of paper.

HANDOUT 3
"THE TWENTY-FIFTH AMENDMENT"

Section 3: President Declares Own Disability
"Whenever the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that he is unable to discharge the powers and duties of his office, and until he transmits to them a written declaration to the contrary, such powers and duties shall be discharged by the Vice-President as Acting President."

Discussion Questions A
1. What role does the President play in deciding his own disability?
2. Under what circumstances might a President choose to declare himself disabled?
3. Does the office of the President devolve upon the Vice-President, or is he considered an acting President only?

Section 4: Vice-President and Cabinet Declare Disability
"Whenever the Vice-President and a majority of either the principal officers of the executive departments or of such other body as Congress may by law provide, transmit to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office, the Vice-President shall immediately assume the powers and duties of the office as Acting President." Thereafter, when the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that no inability exists, he shall resume the powers and duties of his office unless the Vice-President and a majority of either the principal officers of the executive department or of such other body as Congress may by law provide, transmit within four days to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office. Thereupon Congress shall decide the issue, assembling within forty-eight hours for that purpose if not in session. If the Congress, within twenty-one days after the receipt of the latter written declaration, or, if Congress is not in session, within twenty-one days after Congress is required to assemble, determines by two-thirds vote of both Houses that the President is unable to discharge the powers and duties of his office, the Vice-President shall continue to discharge the same as Acting President; otherwise the President shall resume the powers and duties of his office."

Discussion Questions B
1. Who is empowered to certify the President's disability in the event that he does not declare it himself?
2. Is it possible for the President to reclaim his powers once he has been declared disabled by the Vice-President and Cabinet?
3. Can a President who has been declared disabled be prevented from reclaiming his powers? If so, by whom?
4. If a conflict develops between the Vice-President and Cabinet, who declare disability, and the President, who asserts no disability, how is the disability conflict resolved?
5. What majority is required for Congress to certify Presidential disability?

ACTIVITY 3:
Overarching Question:
Use the procedures outlined in the 25th Amendment to decide President Wilson's disability. Explain your thoughts on a separate sheet of paper.

Scenario:
Imagine that the Vice-President and the Cabinet have certified the President's disability. The President attempts to reclaim his powers by notifying Congress that no disability exists. Assume that the Cabinet has recertified the disability. It is now up to the Congress to resolve the conflict within the executive branch. Remember that a 2/3 majority vote in Congress is needed. What do you think should happen? Explain your answer on a separate sheet of paper.

Debrief Your Thoughts:
1. Which factor was most influential in your determination of Wilson's disability?
2. What reasons can be given to explain the fact that Wilson was not declared disabled?
3. Does the wording of the 25th Amendment leave unanswered any questions regarding Presidential disability?
4. What are the advantages and/or disadvantages of having the Vice-President and Cabinet certify disability?

Your Own Legislation:
1. What would your own legislation be regarding Presidents and disabilities? Explain and support your answer.

Deflation: Who Let the Air Out?

Benchmark Standard	**Economics 2a**: Students will develop an understanding of how economies function as a whole, including the causes and effects of inflation, unemployment, business cycles, and monetary and fiscal policies
Grade	10
Vocabulary / Key Concepts	Inflation Federal Open Market Committee (FOMC) Lost Decade Japanese Style Deflation

"Inflation that is "too low" can be problematic, as the Japanese experience has shown."
---James Bullard, President and CEO, Federal Reserve Bank of St. Louis, August 19, 2010

The Federal Open Market Committee (FOMC), the Federal Reserve's policy-setting committee, took further steps in early November 2010 to attempt to alleviate economic strains from a high unemployment rate and falling inflation rates.1 While it is clear that a high unemployment rate and rapidly increasing prices (inflation) are undesirable for economies, it is less obvious why decreasing prices (deflation) can also restrain economic growth.

At its November meeting, the FOMC discussed the potential of further slow growth in prices (disinflation). That month, the price level, as measured by the **Consumer Price Index (CPI)**, was 1 percent higher than it was the previous November.2 However, less than a year earlier, in December 2009, the year-to-year change was 2.8 percent. While both rates are positive and indicate inflation, the downward trend indicates disinflation. Economists worry about disinflation when the inflation rate is extremely low because it can potentially lead to deflation, a phenomenon that may be difficult for central bankers to combat and can have various negative implications on an economy.

While the idea of lower prices may sound attractive, deflation is a real concern for several reasons. Deflation discourages spending and investment because consumers, expecting prices to fall further, delay purchases, preferring instead to save and wait for even lower prices. Decreased spending, in turn, lowers company sales and profits, which eventually increases unemployment. At the same time, borrowing by businesses for investment or by households for big-ticket items (i.e., cars and homes) becomes equally unattractive. For example, consider a $100 loan at a 2 percent interest rate with full payment, $102, due at the end of the year. If during the year there is 5 percent inflation (the price level increases), only $97 in real terms is owed at the end of the year because the money borrowed now purchases fewer goods and services.3 Alternatively, if during the year there is 5 percent deflation (the price level decreases), then $107 dollars in real terms is owed at the end of the year because the money borrowed now purchases more goods and services.4 Because of its potential to cause such an increase in the real cost of borrowing, deflation could cause further pain to an already hard-hit U.S. housing sector as households continue delaying home purchases to circumvent such losses.

Deflation also creates an additional pressure for businesses—wages that remain steady as the price level falls. Unlike pay raises, pay cuts are not well received and usually take time.5 The burden of these higher real wages in a weak economy can further depress business profits, expansion, and hiring. For much of the 1990s and 2000s, these effects plagued Japan as it battled disinflation or deflation in a malaise termed the **Lost Decade**.

During the Lost Decade, Japan's economy experienced a sluggish and lengthy recovery and mild deflation. Although largely contained, companies still faced falling sales and declining profits, which in turn led to higher unemployment and a beleaguered business climate. Declining company profits made funding new business investments difficult, and paying down debt took precedence over business expansion. Stock prices help tell the story: In 2003, Japan's stock prices were trading at 1984 prices.6 Federal Reserve policymakers intend to prevent **Japanese-style deflation** and stagnant growth from taking hold in the United States. To further pursue this goal, at their November 2010 meeting the FOMC voted to begin purchasing long-term Treasury bonds, a policy termed "quantitative easing," in an effort to (i) lower long-term interest rates, thereby encouraging sales and investment, and (ii) discourage price decreases (deflation).7

—By Hoda El-Ghazaly, Research Associate

NOTES:

1 Since the beginning of the financial crisis, to ease economic pressures the Federal Reserve has lowered the federal funds rate to near zero and created lending programs to increase business and consumer access to money. See Anderson, Richard G. and Gascon, Charles S. "A Closer Look: Assistance Programs in the Wake of the Crisis." Federal Reserve Bank of St. Louis Regional Economist, January 2011.
2 The FOMC prefers to consider core rather than headline price index values (as used here). Core inflation eliminates items that can cause temporary price shocks (such as energy and food products) and can therefore serve as a better indicator of long-term inflation trends.
3 The real cost of the loan is the nominal interest rate (2 percent) less the inflation rate (5 percent): 2 – 5 = –3
4 The real cost of the loan is the nominal interest rate (2 percent) less the inflation rate (–5 percent): (2 – –5 = 7).
5 It is also politically difficult, if not impossible, for lawmakers to decrease the minimum wage or Social Security benefits. 6 See Tokyo Stock Exchange. "History of TOPIX." January 22, 2010. 7 The April 2011 Liber8 newsletter will describe the quantitative easing strategy.

ACTIVITY 1:
After reading the article "Deflation: Who Let the Air Out?," answer the following questions on a separate sheet of paper:

1. In your own words, differentiate between the following terms: inflation, deflation, and disinflation.
2. List three reasons deflation is a real economic concern:
3. What country's recent deflationary experience has served as a reference point for Federal Reserve policymakers? Briefly describe the country's experience.
4. What does the FOMC hope to accomplish by purchasing long-term Treasury bonds, a policy termed "quantitative easing"?
5. Imagine a friend thinks that deflation – a falling price level – is a good thing. Based on your understanding, write a short, easy-to-understand paragraph that describes the harmful economic effects of deflation.

ACTIVITY 2:
For Further Study:

1. Use the following quotes to discuss the importance of price stability.

   Stable prices provide a sense of security. They help define a reliable social and political order. They are like safe streets, clean drinking water and dependable electricity. Their importance is noticed only when they go missing. When they did in the 1970s, Americans were horrified. During most of these years, large price increases were the norm, like a rain that never stopped. Sometimes it was a pitter-patter, sometimes a downpour. But it was almost always raining. From week to week, people couldn't know the cost of their groceries, utility bills, appliances, dry cleaning, toothpaste and pizza. People couldn't predict whether their wages and salaries would keep pace. People couldn't plan; their savings were at risk. And no one seemed capable of controlling inflation. The inflationary episode was a deeply disturbing and disillusioning experience that eroded Americans' confidence in their future and their leaders.

   —The Great Inflation and Its Aftermath, by Robert J. Samuelson, pp. 4-5.

   Economists like to argue that money belongs in the same class as the wheel and the inclined plane among ancient inventions of great social utility. Price stability allows that invention to work with minimal friction.

   —Ben S. Bernanke, Chairman of the Federal Reserve http://www.federalreserve.gov/newsevents/speech/bernanke20060224a.htm

2. Explain why price stability—the absence of inflation and deflation—is a benefit to economic performance. Some items you might want to include are the following:

   - People and firms find planning for the future difficult when prices are not stable.
   - Inflation and deflation change the incentives for saving, spending, and borrowing money. For example, unexpected inflation benefits those with a large debt because it allows them to repay the debt in the future with inflated dollars. On the other hand, unexpected deflation benefits savers since their saved dollars will buy more as a result of deflation. Stable prices allow people to make spending and saving decisions without wasting time, money, and energy worrying about unexpected inflation or deflation.