

# NTI Day 3 : Grade 7<sup>th</sup>, Math,

## Multiplying and Dividing Integers



Hints/Guide:

The rules for multiplying integers are:

Positive x Positive = Positive

Positive x Negative = Negative

Negative x Negative = Positive

Negative x Positive = Negative

The rules for dividing integers are the same as multiplying integers.

Exercises: Solve the following problems.

No Calculators!

1.  $6(-8)$

2.  $-5(-9)$

3.  $-63 \div (-9)$

4.  $-36 \div 9$

5.  $12(-6)$

6.  $(-4)(-9)$

7.  $(-5)(-3)(-1)(3)$

8.  $36 \div (-3)$

9.  $-48 \div (-6)$

10.  $\frac{63}{-9}$

11.  $\left(-\frac{3}{4}\right)^2$

12.  $3(-9)$

13.  $(-7)(-6)$

14.  $(-1)(-2)(-3)(-4)$

15.  $-42 \div 7$

16.  $-56 \div -8$

17.  $\frac{48}{-8}$

18.  $-5^2$

# Co-Curricular DAY 3

Return to P.E., Art, Computer, or Practice Livin' teach

## I Can Cope!

with feeling ANXIOUS



Some things that make me feel anxious are...

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

These changes happen when I feel anxious:

Changes in my body...

Thoughts I have...

Things I do...

### When I feel anxious, I can cope by:

Check all of the coping skills that might be helpful! Use the blank spaces to write in your own.

- |   |  |
|---|--|
| <input type="checkbox"/> Deep breathing           | <input type="checkbox"/> Going for a walk        |
| <input type="checkbox"/> Using positive self-talk | <input type="checkbox"/> Writing in my journal   |
| <input type="checkbox"/> Meditating or relaxing   | <input type="checkbox"/> Practicing mindfulness  |
| <input type="checkbox"/> Talking to a friend      | <input type="checkbox"/> Thinking happy thoughts |
| <input type="checkbox"/> Talking to an adult      | <input type="checkbox"/> Keeping myself busy     |
| <input type="checkbox"/> Playing a game           | <input type="checkbox"/> Exercising              |

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## Searching for Survivors [The Run Series, #3]

by ReadWorks



"Dennis! Dennis!" Mac sounded frantic. Dennis raced across the parking lot toward the gas station. "I'm coming, Mac!" he yelled to his friend, and burst into the store.

Mac was at the counter. When Dennis walked in, Mac pointed to the back of the store. The door of the men's bathroom was slowly creaking open. Just then the door swung wide, and a man appeared. The man's hair was matted and disheveled. His clothes were ripped and dirty. Parts of his skin were covered in deep purple and black marks. Even from the door, Dennis could detect the man's stench. He smelled like the fermented slop that they fed to pigs on the ranch. It was obvious that the plague had gotten this man.

The man hovered in the doorway of the bathroom, looking first at Mac and then at Dennis. His eyes were red and bloodshot, and they rolled around in his sockets, unable to focus. "Argghhh," the man growled. Drool dripped down his chin as he stepped forward.

"Mac," said Dennis quietly, backing toward the front door. "Let's get out of here."

Mac began edging toward the door, too, taking the bags of food and supplies with him. Suddenly, the crazed man lurched forward and started running toward the two younger men. Thinking quickly, Dennis reached out to the shelves of soup behind him. He threw the cans at the man as hard as he could. Back when he and Mac lived on the ranch, Dennis used to throw stones to scare off the coyotes. He had a strong throwing arm and good aim.

One of the cans hit the crazed man square in the face, and he crumpled to the ground.



"Don't go near the body," said Dennis. "We don't know if he's contagious."

"Don't worry. I'm not going anywhere near it," said Mac. "Let's get out of here." They turned to exit when they heard another slow creak. Mac and Dennis paused. There was still someone else in the gas station. They turned around and saw that now the door to the women's bathroom was opening. Dennis picked up more cans and handed a few to Mac. They watched the door and readied themselves to throw the cans as soon as a target came into view.

"Hello?" A young boy stuck his head out from the bathroom. He couldn't have been more than six or seven years old. "Is it safe?" he asked.

Mac and Dennis looked at the boy. He seemed healthy but scared.

"How long have you been in there?" asked Mac.

"A day or two," said the boy. "I locked myself in. I saw a group of people coming; they looked dangerous. So I hid. There's no one else around anymore."

Dennis and Mac exchanged a look. They couldn't leave this kid here alone to fend for himself. He wouldn't last a week.

"Grab some supplies, and come with us," said Dennis. "We're looking for other survivors."

The boy followed the two young men to the truck and climbed between them. As they drove, Dennis and Mac learned that the boy's name was Jeremiah. His parents had worked in one of the big hospitals in the city. When the plague hit, they had volunteered to help nurse the first victims. His parents had never come home. Jeremiah had waited a week and then tried to go to the hospital. No one was there. The entire building was abandoned and vacant.

"I don't know what happened to them," said Jeremiah. "So I left the city on my bike. I rode and rode until I came to the gas station. I thought I was safe until a new group of plagued people showed up."

Dennis and Mac nodded. Who knew how many families had been ripped apart by the plague? The important thing now was figuring out their next step. Dennis told Mac that he had heard the voice of a girl on the radio. "Her name was Anna, and she was the last one alive in her town, Sunnydale. She was on her father's radio kit, looking for others," said Dennis.

Mac looked at Dennis. "We're going to Sunnydale, aren't we?" he asked. Dennis nodded.

"And then?" asked Jeremiah.

Mac cleared his throat. He had an idea. Mac pointed out that it was too dangerous to go to the cities and that they only had enough gas to drive another four hundred miles. The safest thing to do would be to go somewhere rural. They should head to a place where they could set up a strong defense. Then they could wait out the plague for a few more weeks before trying to find other survivors.

Dennis thought about Mac's plan. It made sense. "Okay," he said. "But we look for Anna first. We might be her only chance at survival." In his head, Dennis could still hear the girl's voice and her sobbing as she made her radio broadcast.

The sun was setting when the truck pulled onto the main street of Sunnydale. "How will we find her?"

asked Mac. "We can't just knock on every door in this town."

Dennis was fiddling with the radio again. "Let's see if we can hear her," he said. "Maybe she'll say her address." The static cleared, and there again was Anna's voice. She was still broadcasting.

"Is anyone there? Anyone liste-"

Suddenly, Anna's voice stopped. The young men heard a pounding on the door in the background. There was a crash and then sounds of a struggle. Dennis gripped the wheel so hard that his knuckles turned white. They were too late.

"Look!" cried Jeremiah. On the main street, the doors to one of the houses had opened. A teenaged girl was running out. She looked terrified, but not like the wild members of the swarm. Something else came out of the house, chasing her.

"Jump in the truck!" screamed Mac. The girl ran and leapt into the back of the truck, and Dennis hit the accelerator. There was a howl of frustration from the plagued person as his victim escaped.

"Uh-oh," said Jeremiah. "That doesn't look good."

He pointed to the girl's leg. The zombie had cut a long gash in her shin. The wound was already turning dark purple.

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Ed. : *The tale continues in Part 4, "On the Road."*



Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Who walks out of the men's bathroom in the gas station?
  - A. a scared boy who is about six or seven years old
  - B. a terrified teenaged girl who has a wound in her leg
  - C. a man with red eyes, ripped clothes, and a bad smell
  - D. a nurse who volunteered to take care of plague victims at a hospital
  
2. What point of view is this story told from?
  - A. second person point of view
  - B. third person limited point of view
  - C. third person omniscient point of view
  - D. first person point of view

3. Read these sentences from the text.

"Mac was at the counter. When Dennis walked in, Mac pointed to the back of the store. The door of the men's bathroom was slowly creaking open. Just then the door swung wide, and a man appeared. The man's hair was matted and disheveled. His clothes were ripped and dirty. Parts of his skin were covered in deep purple and black marks. Even from the door, Dennis could detect the man's stench. He smelled like the fermented slop that they fed to pigs on the ranch. It was obvious that the plague had gotten this man."

Based on this evidence, what can you conclude about people who get the plague?

- A. People who get the plague have to go to the bathroom more often than people who do not have the plague.
- B. People who get the plague have short hair, wear long pants, and use a lot of deodorant.
- C. People who get the plague develop purple and black marks and become smelly.
- D. People who get the plague start to behave like pigs.

4. Why might Dennis have thrown cans at the man running toward him and Mac?
- A. Dennis thought the man was hungry and wanted to provide him with cans of soup.
  - B. Dennis thought the man was harmless and wanted to tease him by throwing cans at him.
  - C. Dennis thought the man was dangerous and wanted to protect himself and Mac.
  - D. Dennis thought the man was lost and wanted him to start walking in the opposite direction.
5. What is the main idea of this story?
- A. A few young people try to stay safe from crazed plague victims.
  - B. Dennis and Mac meet a boy named Jeremiah at a gas station.
  - C. A man with ripped clothes and red eyes runs out of a bathroom toward Mac and Dennis.
  - D. A teenaged girl jumps into the back of a truck after being attacked by a zombie.

6. Read these sentences from the text.

"Mac was at the counter. When Dennis walked in, Mac pointed to the back of the store. The door of the men's bathroom was slowly creaking open. Just then the door swung wide, and a man appeared. The man's hair was matted and disheveled. His clothes were ripped and dirty. Parts of his skin were covered in deep purple and black marks. Even from the door, Dennis could detect the man's stench. He smelled like the fermented slop that they fed to pigs on the ranch. It was obvious that the plague had gotten this man."

Imagery is descriptive language that focuses on one or more of the five senses: sight, sound, touch, smell, and taste. What senses does the imagery in these sentences focus on?

- A. sound, touch, and taste
- B. sight, touch, and taste
- C. touch, smell, and taste
- D. sight, sound, and smell



7. Read these sentences from the text.

"Mac and Dennis looked at the boy. He seemed healthy but scared."

How could these sentences be combined without changing their meaning?

- A. Mac and Dennis looked at the boy, which seemed healthy but scared.
- B. Mac and Dennis looked at the boy, who seemed healthy but scared.
- C. Mac and Dennis looked at the boy, although healthy but scared.
- D. Mac and Dennis looked at the boy and seemed healthy but scared.

8. Whom or what is a teenaged girl running from at the end of the story?

9. What color does the wound on the girl's leg turn?

10. Read these sentences from the text.

"Mac was at the counter. When Dennis walked in, Mac pointed to the back of the store. The door of the men's bathroom was slowly creaking open. Just then the door swung wide, and a man appeared. The man's hair was matted and disheveled. His clothes were ripped and dirty. Parts of his skin were covered in deep purple and black marks. Even from the door, Dennis could detect the man's stench. He smelled like the fermented slop that they fed to pigs on the ranch. It was obvious that the plague had gotten this man."

Based on these sentences and the color of the girl's wound at the end of the story, what might happen to the girl? Support your answer with evidence from the text.



7 Science Day 3  
1/4

**ESSENTIAL QUESTION:** What might be some of the unintended consequences of throwing away food?

**T**hanksgiving means spending time with family and friends and, of course, enjoying foods like turkey, mashed potatoes, and pumpkin pie. But much of the food that's grown, sold, and prepared for holiday feasts—as well as everyday meals—doesn't actually end up on people's plates. It gets thrown in the trash instead.

According to new findings from the Natural Resources Defense Council, an environmental group based in New York City, as much as 40 percent of the food produced in the U.S. never gets eaten. The tossed-out food is worth about 1,500 calories per person per day—almost enough to feed an additional person. All that waste adds up to a staggering \$165 billion annually (see *The Foods We Waste*, right).

"Some people might claim they don't waste food, but all of us do," says Elise Golan, a food economist at the U.S. Department of Agriculture in Washington, D.C. "We just don't pay attention."

Growing food that ends up as garbage isn't just wasteful. It takes a toll on the environment too, using up water and other resources and adding to already overflowing landfills when that food could be used to help those who don't have enough to eat. All of this has led Golan and others to search for solutions to fight widespread food waste.

### NOT SO GREEN

When you throw away food, a lot of resources are being wasted that you don't actually see. "People don't fully understand what's required to make the food they're eating," says Jennifer Schmitt, a biologist at the University of Minnesota. "When studying food waste, you look at what's wasted along the whole supply chain—from growers, processors, retailers, and consumers."

It takes manual labor, water, fuel, fertilizers, containers, and other resources to make the food we eat. When a package of strawberries goes bad in the fridge, all of the resources that went into growing, packaging, and transporting the fruit are wasted too.

According to a report from the University



**IT'S BANANAS!**  
About 52 percent of fruits and veggies are thrown out instead of eaten.

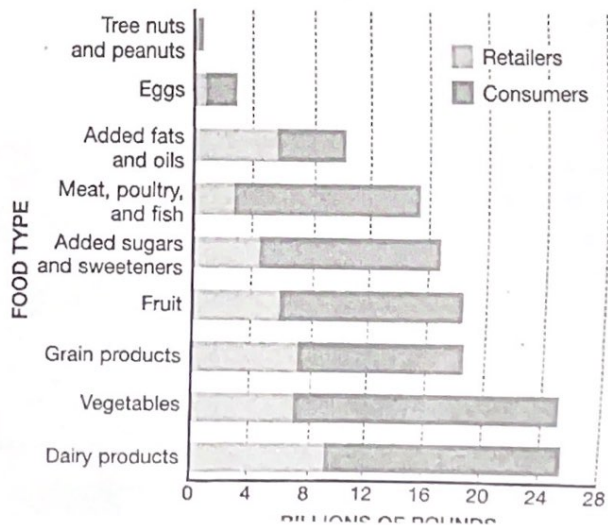
fertilizer, and as much as 15 percent of the water used to grow food in the U.S. In addition, about 2 percent of all energy produced in the U.S. goes toward making food that's just thrown away. But the harmful effects of wasted food don't end once it's in the garbage.

*Continued on the next page →*

What a waste" article from ScienceNow magazine

## THE FOODS WE WASTE

This graph shows food wasted in the U.S. each year—by both retailers and consumers.





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Data from the U.S. Environmental Protection Agency (EPA) shows that food is the single largest component of our everyday trash, much of which ends up in landfills. Not only does excess trash take up space, but rotting food waste also produces *methane*. This *greenhouse gas* traps heat in Earth's



## WHY IT'S WASTED

Here's a breakdown of some of the causes of food waste in the U.S.

### FARMS

Crops are left unharvested because of lack of demand or manual labor.

### PROCESSING

Errors on labels can lead to recalls that prevent food from being sold.

### SHIPPING

If a product is frozen or refrigerated and arrives even one degree above what is recommended, a store can reject the product. If cans or packaging are damaged, a product can also be rejected.

### STORES

Produce that doesn't look appealing often doesn't make it to store shelves.

### RESTAURANTS

Unsold food is usually thrown away at the end of the day.

### AT HOME

People toss out perfectly good food instead of eating leftovers, or because a package's sell-by or best-by date has passed, even though the food is still safe to eat.

atmosphere, causing the planet's average temperature to rise. Almost all scientists believe that methane and other greenhouse gases are the main cause of global climate change.

"[Methane is] a huge problem for the environment," says Schmitt. She explains that the gas traps about 30 times more heat in the atmosphere than carbon dioxide, another greenhouse gas, which is emitted by burning fossil fuels such as coal, oil, and natural gas. According to the EPA, landfills are the third-largest source of methane in the U.S., after

the burning of fossil fuels and the digestive gases produced by farm animals. Reducing the amount of food in our landfills could make a big difference in the fight against climate change, says Schmitt.

## FOOD FOR ALL?

There's another reason it's important to reduce waste: In the U.S., more than 42 million people—including 13.1 million children—live in homes that face *food insecurity*. That means about 13 percent of American households lack access to a consistent source of food. With that in mind, researchers say we need to come up with solutions that provide food to those who need it most instead of sending it to the dump.

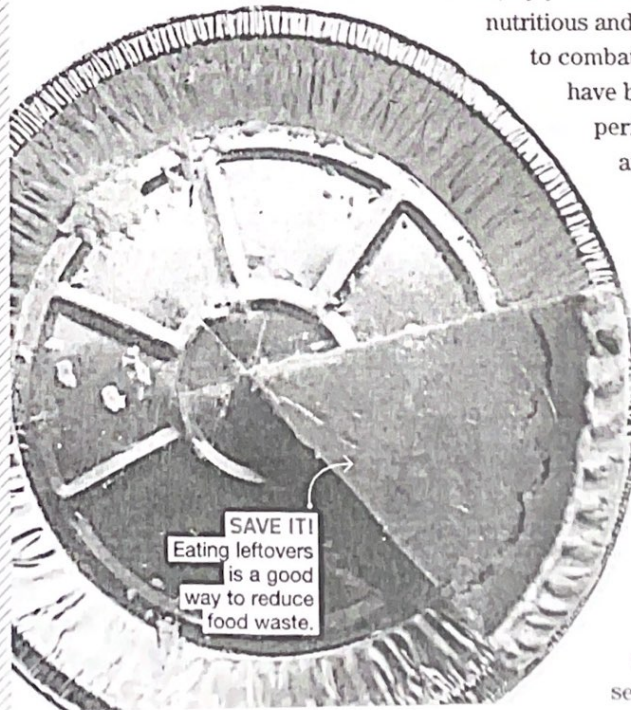
One way to do that is to develop ways to keep foods fresher longer to prevent them from spoiling before they can be eaten. Another strategy is to recover food destined for the trash that is still safe to eat. Golan says some of the food we waste is perfectly edible and could be donated to food banks to feed the hungry.

## RESCUING FOOD

Grocery stores and restaurants are major sources of food waste. They often send back food shipments because they don't look appealing or are slightly damaged (see *Why It's Wasted, left*). But these "ugly" foods are still nutritious and safe to eat. In an effort to combat this waste, some stores

have begun selling not-so-perfect apples, bananas, and other produce at cheaper prices. Others are stocking foods rejected by competitors because they're close to their sell-by dates. Both tactics offer healthy and inexpensive options for people in need.

Ismail Samad is the executive chef at the Daily Table, a grocery store in Massachusetts serving low-income







**DUMPED!**  
Huge piles of tomatoes and beans rot in a field near Palm Beach, Florida.

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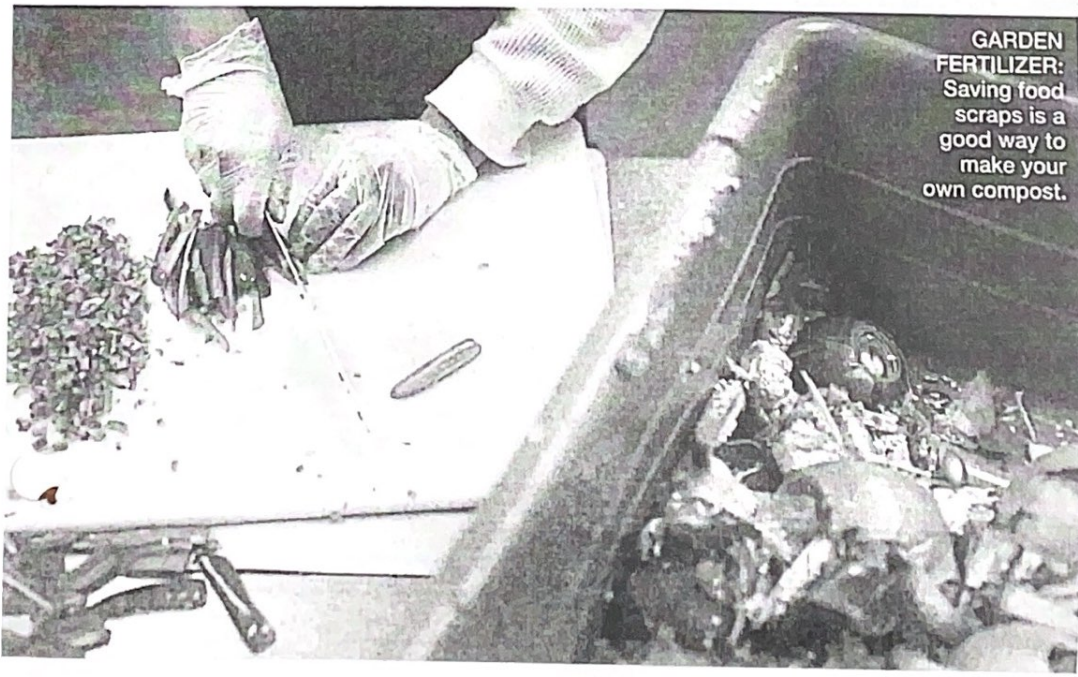
and manufacturers to recover surplus food at no or low cost. "Our core mission is to offer healthy, nutritious food that's the same price as healthy fast food," says Samad.

**HANGING BEHAVIORS**

The reality, though, is that the general public is the biggest source of food waste in the U.S., according to Golan. People buy too much of something and let it rot before they can eat it.

They also take large portions and throw away the leftovers. But some simple steps could help reduce this waste.

Spoiled food, as well as food scraps, can be turned into *compost*—fertilizer made up of decayed organic matter. Golan also encourages people to eat leftovers. "Leftovers are a treasure!" she says. "Invite people over for leftovers the day after Thanksgiving instead of throwing away the food." ❁ —Andrew Klein



**GARDEN FERTILIZER:**  
Saving food scraps is a good way to make your own compost.

**MAKE IT!**  
Check out our DIY Challenge (p. 24) to design a plan to prevent, recover, and recycle food at your school that would be otherwise be

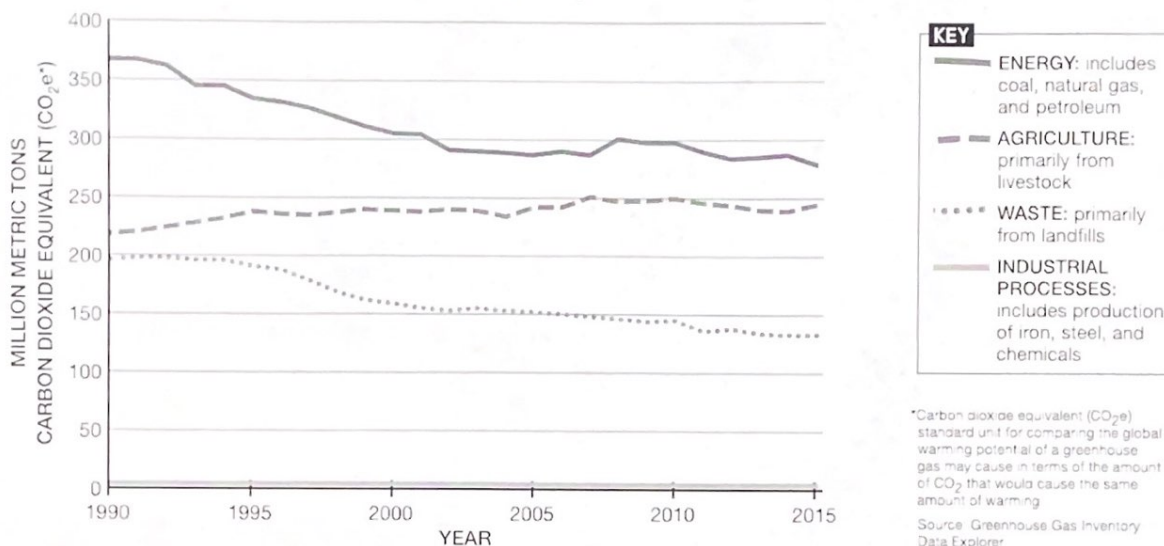


Name: \_\_\_\_\_

## RELEASING METHANE

In "What a Waste!" (p. 20), you learned that food rotting in landfills releases methane ( $\text{CH}_4$ ), a greenhouse gas that traps heat in Earth's atmosphere. Landfills aren't the only source of methane in the U.S. The graph below shows the amount of methane released by different sources from 1990 to 2015. Use the graph and the article to answer the questions that follow.

**METHANE EMISSIONS BY SOURCE  
IN THE U.S. (1990-2015)**



### ANALYZE IT

- About how much methane was emitted by waste in 2015?
- What is the largest source of methane emissions in the U.S.? How does it compare to methane from landfills?
- Based on the graph, describe the trend of methane emissions from waste from 1990 to 2015.
- What change to people's food consumption could have a bigger effect on methane emissions than the reduction of food waste? Explain your answer.
- Why is it important to measure methane in the atmosphere? Use evidence from the graph and the article to support your answer.



Am Social Studies-Day 3 NTI

## Athens and Democracy

### Government in Athens

The oligarchy of Sparta was radically different from the type of government practiced by the Athenians, who set up a **democracy**. The constitution was not in the hands of the few; rather, it was controlled by the many—the **demos** or people.

### Solon

Four men were responsible for the development of democracy in Athens. Solon, in 594 B.C., was the first. He made social and political reforms to lessen the conflict between the rich and poor in the city. In order to free all citizens from debt and enslavement, he cancelled all debts and abolished slavery. Politically, he reduced the power of the wealthy aristocrats by giving more power to the people.

The government already consisted of two leaders called **archons** who held the executive power. These men were advised by an aristocratic council of elders called the Council of the Areopagus (the **Areopagus** was a hill in Athens where its meetings were held). To these Solon now added three new political bodies that gave more power to the average citizen: a People's Court where all disputes, public or private, were settled by the people; the People's Assembly (to which all Athenian citizens belonged) that decided on the matters of the state; and a Council of 400 (which consisted of 100 citizens from each of the four tribes that made up the Athenian citizenry) that prepared business for the Assembly to consider. Solon's reforms, however, pleased neither the populace, because not enough power was given, nor the aristocrats, because their power was decreased. Unrest followed.

### Peisistratus

Peisistratus then became tyrant in 560 B.C. Among his benefits to the city, he continued the process of democratization by **redistributing** the land (previously owned by the rich nobles) to farmers and making loans to poor farmers to start anew.

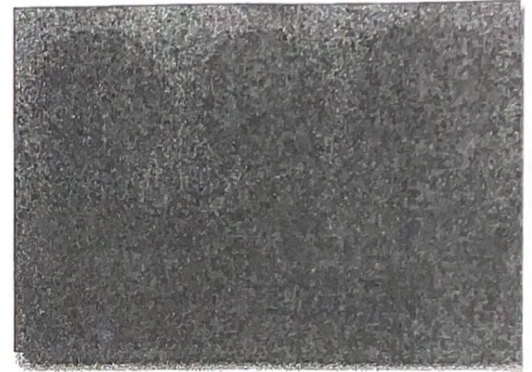
### Cleisthenes

In 508 B.C. a third influential figure, Cleisthenes, came to power in Athens. He did much to develop Athenian democracy. Cleisthenes divided the citizens into ten new tribes (from the four old tribes) and mixed them up so that no one tribe was dominated by the rich as had been the case before. He increased the Council of 400 to the Council of 500, which now consisted of 50 citizens from each tribe. He also introduced the practice of **ostracism**. Every year the Athenians could banish from the city any man they deemed threatening. This was done by writing his name on a potshard or **ostraka**. The man with the most votes was then exiled for ten years.

### Pericles

It was in the time of Pericles (461–429 B.C.), one of Athens' best statesmen, that democracy was completely attained. He made all offices in the government payable, and all officers were elected by lot rather than by vote, so that even the poorest citizens now could participate in the government.

Athenian democracy has influenced many democratic governments in world history, including the American governmental system.



Examples of ostraka (potshards) cast against Themistocles

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Knowledge Check

#### Matching

- |                         |  |
|-------------------------|--|
| _____ 1. archons        | a. potshards that people used to cast votes                      |
| _____ 2. Areopagus      | b. rule by the people  |
| _____ 3. democracy      | c. taking land from rich nobles and dividing it up among farmers |
| _____ 4. demos          | d. the people  |
| _____ 5. ostracism      | e. voting to banish any man deemed threatening                   |
| _____ 6. ostraka        | f. the hill in Athens where the council of elders met            |
| _____ 7. redistributing | g. two leaders who held executive power in Athens                |

#### Multiple Choice

8. Who was the first Athenian leader to start the process of democracy?
- |                |                 |
|----------------|-----------------|
| a. Cleisthenes | b. Peisistratus |
| c. Pericles    | d. Solon        |
9. By mixing up the citizens in the tribes, Cleisthenes wanted to prevent the \_\_\_\_\_ from dominating any one tribe.
- |             |            |
|-------------|------------|
| a. soldiers | b. rich    |
| c. farmers  | d. archons |

#### Constructed Response

10. What differences and similarities do you see between the Spartan and Athenian governments? Use details from this reading selection and the one on Sparta to support your answer.

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