

Spelling Power

Unit 1: Review Lessons 1–4

although	abstract	challenge	chaos	debris
diaphragm	digital	efficiency	endurance	enlighten
fulfill	guarantee	mainstay	official	repeatedly
subtle	successful	symbolic	infinity	vague

Choose the words from the list that best complete the “terse verse” rhymes. Write your choices on the lines.

- _____ at the boundary line: disorder at the border
- _____ snoop: computer intruder
- trash in the ocean: _____ in the sea
- is _____ of campground shelters: represents tents
- be _____ and catch people’s interest: understate and fascinate
- educate the giant: _____ the titan
- meet the terms of the final testament: _____ the will
- endless supply of white fudge : _____ of divinity
- hard-to-grasp agreement: _____ contract
- explaining what _____ means: defining streamlining

Choose the words from the list that best complete the sentences. Write your choices on the lines.

- Leona wants to play the tuba, _____ her parents suggest the piccolo.
- When Leona asks her parents why they prefer the piccolo, they can only give her a _____ explanation of their concerns.
- For example, they ask if Leona can give an absolute _____ that she won’t disturb the neighbors.
- She patiently and _____ reassures them that she will practice softly.
- She likes overcoming obstacles, so she relishes the _____ that the tuba offers.
- The brass section is important; it’s the _____ of the marching band.
- A tuba player needs muscles as well as musical ability to be _____ at band tryouts.
- She practices deep breathing to strengthen her _____.
- She jogs and lifts weights to build stamina and _____.
- Leona has just one objection: the _____ band uniforms are lime green and orange.

Spelling Power

Proofreading Application

Lessons 1–4

Read the updated fairy tale below. Find the twenty misspelled words and circle them. Then, on the numbered lines, write the correct spelling for each circled word.

Once there lived a king who wouldn’t let his daughter marry. The queen was in complete accord. “We’ll be candid, Rapunzel, dear,” they told the princess. “There is no evadence we will ever find a suitor worthy of you.”

“But I have fundamental objections to being single!” wailed the princess. “This is gastly! If you do not let me find a husband, I guaranty I will run away!”

After that dialouge, the king began to speceulate about the wisdom of leaving Rapunzel unguarded. He locked her in a magnificent tower deep in the forest. There she spent her days clamoring for vengence, silent only when fatig overcame her.

Meanwhile, following culturel norms, the prince of a nearby satelite state set off on a quest. Althou he was awed by the tower, he was confused by the sounds of fury coming from it. He prudently donned camaflauge gear and hid in the underbrush.

Soon there appeared—an oponent? No, it was only the king’s asistant. “Rapunzel, Rapunzel!” the servant cried. “Let down your hair!” From a high window, the princess uncoiled her long braid. The servant tied a basket to the braid, and Rapunzel pulled up her supper.

“What luck that the servant’s arrival should coinciede with mine!” thought the prince. As soon as the servant left, he emerged and called, “Rapunzel, Rapunzel, let down your hair!”

Rapunzel looked down to see a man dressed as a gooseberry bush. “Well,” she thought, “I comend his creativity . . .” She uncoiled her braid, and the prince began to climb up.

“Yowch!” howled Rapunzel. “How much do you weigh?”

“Patience, sweet petunia! Soon you’ll be mine!”

But Rapunzel reached for the scissors. “Why should I go bald just to gratify you? I’m a princess, not a climbing rope. Go find yourself another petunia. And lose some weight!”

Snip! The prince was history. Rapunzel made peace with her parents, inherited the kingdom, and lived happily ever after.

- | | | |
|----------|-----------|-----------|
| 1. _____ | 8. _____ | 14. _____ |
| 2. _____ | 9. _____ | 16. _____ |
| 3. _____ | 10. _____ | 17. _____ |
| 4. _____ | 11. _____ | 18. _____ |
| 5. _____ | 12. _____ | 19. _____ |
| 6. _____ | 13. _____ | 20. _____ |
| 7. _____ | 14. _____ | |

Spelling Power

Unit 2: Review Lessons 5–8

cede	comparable	conceding	exceed	faculty
flawless	haunted	kernel	minimum	perceive
priestly	reigning	seaboard	secede	slaughter
sovereign	superseded	thoughtful	unyielding	vigor

Choose the words from the list that best complete the sentences. Write your choices on the lines.

- Graybeard the Pirate, who prowled the east coast, was called the scourge of the eastern _____.
- His reputation was similar to Captain Kidd's; the fierceness of the two pirates was also _____.
- The king of Spain, like every other _____, dreaded Graybeard's attacks.
- The fierce pirate never backed down; he was _____ in his quest for riches.
- An ability to sense treasure nearby was his keenest _____.
- Only a sharp observer might _____ his weakness.
- A secret terror _____ the bold marauder, giving him no peace.
- It was a wise and _____ sailor who first realized that Graybeard never attacked on a Monday.
- Instead, he would _____ safe passage to any ship he met.
- Did his fear of Mondays _____ his desire for wealth?

Unscramble each set of letters to spell the words defined below. Write the words on the lines. Use the word list to check your spelling.

- _____ 11. grovi – strength
- _____ 12. nerkle – small nugget or core
- _____ 13. deesce – to withdraw from a group
- _____ 14. immunim – least
- _____ 15. selflaws – perfect
- _____ 16. eggrinni – ruling or governing
- _____ 17. ripstyle – of the clergy
- _____ 18. galetrush – to butcher or massacre
- _____ 19. deepressu – to replace
- _____ 20. cincegnod – yielding or acknowledging

Spelling Power

Proofreading Application

Lessons 5–8

Read the whodunit story below. Find the twenty misspelled words and circle them. Then, on the numbered lines, write the correct spelling for each circled word.

"Alas!" moaned Dorothea, Duchess of Dotson. "My priceless hierloom—stolen!" The awthentic Hittite pinky ring (gold, with an inlaid design of battle-axes) had vanished over the weekend. Police seizure of possible evidence had turned up no clues.

Luckily a famous detective and philosepher had agreed to take the case. His percentige of successes was phenomenal. "Ether I'll solve this mystery within the week," he announced, "or my name isn't Socrates Sleuth."

Haste was essential; the trail grew colder with each succedeing day. As a precotion, Sleuth interviewed all members of the household, no matter how lowly their statis. He pieced togeth-er an idea of events that had preseded the theft.

Now he had the wieghty task of drawing a conclusion. He thought so hard that the viens in his forehead bulged. He thought so hard that his hairline recedeed before the Duchess's eyes. "I suspect," he said at last, "that this crime procedes from the den of the notoarious felon, I. R. Smartalecky." There was an awdible gasp from behind the door. Sleuth's demeanor changed. "Would it appaul you, Duchess Dotson," he intoned, "to learn that the criminal is in this very house?"

He opened the door to reveal a sight that was almost comide: Sneeps, the butler, was listen-ing at the keyhole. Quickly the parlor maid moved to interseede. "He couldn't have stolen the ring!" she cried. "He wasn't even here at eleven on Saturday night!" Her wild eyes showed a lack of emotional stablility.

"Ah," said Sleuth, "and how do you know the precise day and time of the theft? No one else had any idea."

Betrayed by her love for the butler, the maid confessed.

"Sleuth, you're a genius!" exclaimed the duchess. "At what school did you learn your craft so well?"

Sleuth rolled his eyes. "Elementary, my dear Dotson."

- | | | |
|----------|-----------|-----------|
| 1. _____ | 8. _____ | 15. _____ |
| 2. _____ | 9. _____ | 16. _____ |
| 3. _____ | 10. _____ | 17. _____ |
| 4. _____ | 11. _____ | 18. _____ |
| 5. _____ | 12. _____ | 19. _____ |
| 6. _____ | 13. _____ | 20. _____ |
| 7. _____ | 14. _____ | |

May 4, 2020

Coronavirus and the Economy

How does the coronavirus impact different parts of the economy?

Create Your Blast

How does the coronavirus impact different parts of the economy?

Remember to use RACE. Restate the question, answer the question, cite your evidence and explain.
(This must be 3 paragraphs with 9-12 words in a sentence.)

Answer the StudySync QuikPoll



What is the best way to protect the economy during the coronavirus outbreak?

- Sending money to all Americans, encouraging people to spend money and help the economy.
- Providing paid sick leave, so people with the coronavirus can stay home and stop the spread.
- _____ and we can get back to normal.
- Investing in coronavirus vaccine research, so we can halt the effects of the virus.
- Something not listed here.

Number Crunch

39

Amazon accounts for about 39 percent of all e-commerce sales in the United States, according to CNET.

StudySync Blast Info



Background

The coronavirus outbreak is affecting many different parts of the world's economy. We have compiled a list of answers to frequently asked questions about the outbreak's economic impact.

We're learning more about COVID-19 every day. Some information and advice is likely to change. Visit the Centers for Disease Control (CDC) website for the most up-to-date information about the coronavirus.

How is the coronavirus affecting the global economy?

The coronavirus is affecting almost all aspects of the economy. It affects factories, restaurants, airlines, banks and farms. Richard Kozul-Wright is the director of the Division on Globalization and Development Strategies at the United Nations Conference on Trade and Development. Kozul-Wright says that the economic slowdown will cost the global economy at least \$1 trillion total. But what does that actually mean? Neil Irwin is a senior economics correspondent for The New York Times. "One person's spending is another person's income," Irwin says. "That, in a single sentence, is what the \$87 trillion global economy is."

In other words, some people cannot make money because their city or country is enforcing mandatory quarantines. Those people cannot spend money. This becomes a global problem when countries restrict the transport of goods. This restriction slows global trade. This stops the flow of money around the world. China is the world's second-largest economy. It has faced harsh effects. The nation saw its industrial output drop by 13.5 percent in January and February 2020 compared sales dropped by 20.5 percent.

OK — what about the American economy?

It can be helpful to look at the stock market to understand how the coronavirus is impacting the U.S. economy. The term stock market often refers to the largest stock market indexes. Examples include the S&P 500 or the Dow Jones Industrial Average (the Dow). The stock market shows how well all listed companies are doing, according to writer Kimberly Amadeo. "If investors are confident, they will buy stocks, stock mutual funds, or stock options," Amadeo writes for The Balance. "Some experts believe markets predict what the savviest investors think the economy will be doing in about six months." The Dow measures the stock of 30 large companies in the U.S. On March 16, 2020, the Dow witnessed a historic drop. It was its third-worst day ever. The Dow closed the day with a decrease in value of 12.9 percent. Ian Goldin is a professor of economics at the University of Oxford. Goldin says that local and international response is necessary to help the U.S. economy. "America cannot save itself in isolation," Goldin writes for The New York Times. "Focusing inward at the expense of outward engagement alienates others and undermines the political good will necessary to find joint solutions to our common problems. The local and global need to go hand in hand."

Which jobs have suffered the most?

It all depends on your location. However, certain types of jobs are suffering more. Some states or cities have forced certain businesses to close. Examples include restaurants, movie theatres and gyms. According to a March 17 poll by NPR, PBS NewsHour and Marist College, approximately one in five households have either lost work or face fewer hours. Jobs at airlines, hotels, retail stores and in entertainment have seen an immediate effect. This is because people are cancelling

upcoming trips and practicing social distancing. This will also impact the future economy. People could lose their jobs and use up their emergency savings or money in the stock market. Then, they will spend less on construction, new cars, and other expenses in the next few months.

How are companies responding?

Companies like Starbucks and local coffee shops are typically gathering places. Many of these businesses are now only allowing to-go or drive-through orders. Movie theatres are operating at lower capacity or closing entirely. So, movie studios are changing their strategies. Universal Pictures has chosen to make many of its movies that were exclusively in theatres available to rent online. Some major companies have offered paid leave for their employees. One example is the Darden Restaurant Group. This company operates Olive Garden and other restaurant chains.

How are major U.S. companies, like Amazon, handling the coronavirus problem?

With more people staying home, online shopping has greatly increased. Amazon has seen a lot more demand for certain goods. In response, the company announced on March 16 that it would hire 100,000 workers to meet their distribution needs. Workers will receive a \$2 per hour increase until the end of April. However, Amazon could soon run into a supply chain issue. When will hand sanitizer, cleaning supplies, and other in-demand items sell out? Will goods that were supposed to ship from other countries be fulfilled, if those countries had shutdowns? On March 19, Amazon reported its first confirmed COVID-19 case in a worker at its Queens, New York, warehouse. This case made people feel concerned about the possibility of coronavirus spreading through delivery and large warehouses.

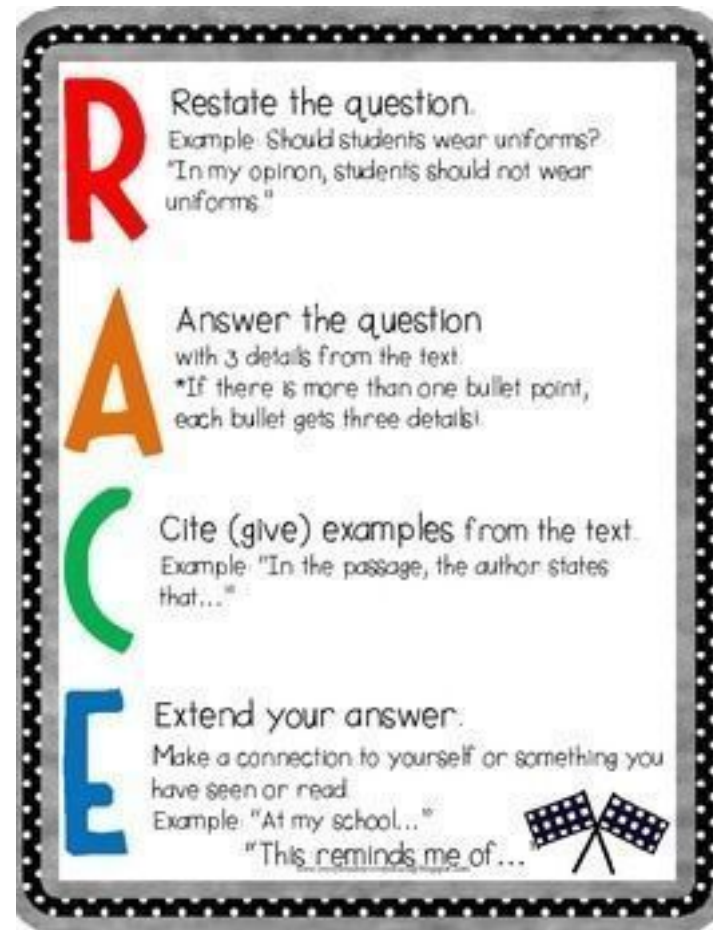
Has the government stepped in to offer assistance?

On March 18, President Donald Trump signed a coronavirus relief package into law. This package includes free testing for the coronavirus and paid emergency leave, according to CNN. This stimulus package also includes a plan to send a total of \$500 billion to Americans in two large payouts. "The first one would be \$1,000 per person, \$500 per child," Treasury Secretary Steven Mnuchin said. "So for a family of four, that's a \$3,000 payment. As soon as Congress passes this, we get this out in three weeks. And then, six weeks later, if the president still has a national emergency, we'll deliver another \$3,000." Both Democratic and Republican senators said they support the plan. "The amount of spending, does it give everybody pause? A little bit," said Republican Sen. Joni Ernst. "But you know what? It needs to be done."

What do you think? How does the coronavirus impact different parts of the economy?

How does the coronavirus impact different parts of the economy?

(Write your 3 paragraphs on lined paper and attach it. Use RACE. If you have a printer, you may type it up and attach it. Don't forget to include proper heading with your full name, Core Class and the date.)

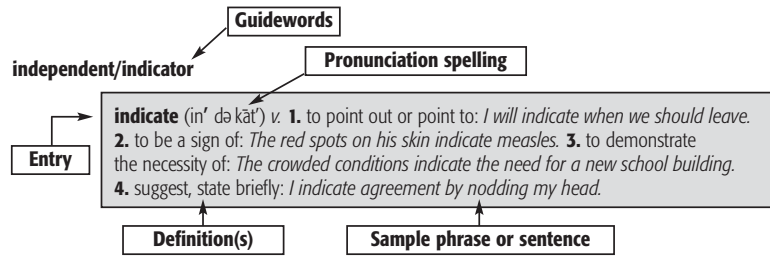


Vocabulary Power

Lesson 5 Using Reference Skills

Using a Dictionary Entry

You already know that a dictionary is a valuable source of definitions. The words defined in a dictionary are called entries. Look at the sample entry below.



EXERCISE

Use the sample entry to answer each question.

- Which entry would you find on this page, *indefinite*, *index*, or *individual*? _____
- Which meaning of *indicate* is being used in the following sentence?
The darkening clouds *indicated* the storm's approach. _____
- On which syllable does the major accent fall in the word *indicate*? _____
- Use the third meaning of *indicate* in a sentence of your own.

- Use the fourth meaning of *indicate* in a sentence of your own.

- What guidewords might be on the pages before and after the page of this entry?
before _____
after _____
- Use the second meaning of *indicate* in a sentence of your own.

Vocabulary Power

Review: Unit 1

EXERCISE

Circle the word in parentheses that best completes each sentence.

- We started a poster campaign to get students involved in school issues and to fight (apathy, burden, providence).
- As the sun rose, the dark outline of the mountain peak slowly became (patriotic, erratic, visible).
- It's best not to get upset about (paternal, inaudible, trivial) or unimportant matters.
- The brightly colored birds are from (naive, portable, exotic) locations around the world.
- The explorer read the strange (inscription, asset, motive) on the ancient treasure chest with growing excitement.
- Paul promised not to (divulge, consent, prescribe) the secret I whispered to him.
- Because he was almost fifteen years older than his younger brother, Mark's feelings for Michael were more (naive, paternal, trivial) than brotherly.
- The crowded conditions and harsh rules in the prison caused feelings of (dictator, diction, dissension) among the prisoners.
- You have to be (exotic, agile, patriotic) to complete the obstacle course.
- We must find a way to make drivers (comply, dissent, propel) with the speed limit.

Vocabulary Power

Test: Unit 1

PART A

Circle the letter of the word that best completes the sentence.

- The police wondered about the man's _____ for committing the crime.
a. apathy b. motive c. providence d. diction
- You'll have to improve your _____ if you want people to understand what you are saying.
a. diction b. burden c. asset d. exhibit
- Only a _____ person would tell a stranger his credit card number.
a. paternal b. naive c. portable d. visible
- The pilgrims gave thanks to _____ for their plentiful harvest.
a. his dictator b. the inscription c. providence d. the burden
- The photographers waited for the groundhog to _____ from his hole.
a. depart b. propel c. provide d. emerge
- I hope the doctor can _____ something strong for this toothache!
a. prescribe b. divulge c. exhibit d. dissent
- Because she couldn't change the judge's decision, Shelley became _____ to it.
a. divulged b. prescribed c. resigned d. neglected
- I'll write down the message if you _____ it slowly and clearly for me.
a. propel b. dictate c. comply d. exhibit
- Have you decided which seashells to _____ in the showcase?
a. consent b. divulge c. depart d. exhibit
- The company president explained that the new factory would _____ compact discs.
a. dictate b. exhibit c. propel d. manufacture
- I could see the stage all right, but the _____ quality was poor.
a. exotic b. auditory c. paternal d. agile
- Taking class notes for you while your broken arm heals won't be a _____ at all.
a. burden b. diction c. dissension d. providence
- While most club members agreed with the decision, I expect Ricky to _____ forcibly.
a. consent b. comply c. dissent d. scribble

Vocabulary Power *continued*

- The congresswoman pounded the table and stated that she would never _____ to raising taxes for the poorest taxpayers.
a. consent b. dissent c. dictate d. prescribe
- Will made all the decisions for the chess club like a(n) _____, without asking anyone else's opinion.
a. burden b. dictator c. asset d. exhibit
- If you carelessly _____ the instructions, there's a good chance someone will misunderstand them.
a. propel b. manufacture c. scribble d. depart
- Think about your answer for a while instead of answering _____.
a. with a scribble b. wholeheartedly c. with a motive d. rashly
- Because the criminal was a citizen of another country, the judge decided to _____ him instead of sentencing him to jail.
a. divulge b. depart c. specify d. prescribe
- Doing volunteer work at the animal shelter will certainly _____ you to the problem of too many stray dogs and cats.
a. exhibit b. dictate c. sensitize d. divulge
- Be sure to _____ that you want the peaches with the red centers.
a. specify b. exhibit c. dictate d. depart

PART B

Circle the letter of the expression that best answers the question.

- What propels a sailboat through the water?
a. the water b. the captain c. the rudder d. the wind
- Toward what would a person have patriotic feelings?
a. a baseball team b. a country c. a pet d. a beverage
- What activity would *not* take place in an auditorium?
a. a rehearsal b. a concert c. a play d. a swimming meet
- If you are in agreement with a proposal, you would express your _____.
a. asset b. dissent c. consent d. inscription
- How would you describe having a reputation as an honest person?
a. an asset b. a burden c. a motive d. an exhibit

Lesson 5 Sentence Fragments

A sentence must have a subject and a predicate and must express a complete thought. A group of words that does not have both a subject and a predicate is an incomplete sentence, or **sentence fragment**.

The truck, an old red one. (lacks a predicate)
Slowly climbed the steep hill. (lacks a subject)
On the country road outside of town. (lacks a subject and a predicate)

► **Exercise 1** Write *sent.* in the blank if the group of words is a sentence and write *frag.* if it is a fragment.

- frag. Learned about bees.
- _____ 1. Geneticist Warwick Kerr studied honeybees.
 - _____ 2. At the University of São Paulo in Brazil.
 - _____ 3. In 1956 he imported some African queen bees.
 - _____ 4. These bees had a savage reputation.
 - _____ 5. Attacked animals and people without warning.
 - _____ 6. However, African bees sting only to defend their nest.
 - _____ 7. Most stinging incidents occur during the swarming season.
 - _____ 8. The hot summer months.
 - _____ 9. Stinging incidents by large numbers of bees are uncommon.
 - _____ 10. Dr. Kerr carefully kept the bees in enclosures.
 - _____ 11. Not another beekeeper.
 - _____ 12. Allowed twenty-six queens and their swarms to escape.
 - _____ 13. The African bees readily nested in the wilds of Brazil.
 - _____ 14. Reproducing quickly and swarming frequently.
 - _____ 15. The African honeybees began to spread.
 - _____ 16. In all directions.

Grammar
Grammar

► **Exercise 2** Write *S* in the blank if the fragment lacks a subject and *P* if it lacks a predicate. If the sentence is complete, write *sent.*

- P Honey bees, digger wasps, and red ants.
- _____ 1. Live together in colonies.
 - _____ 2. Did you know that a colony may contain thousands of insects?
 - _____ 3. One queen.
 - _____ 4. Produce all the eggs.
 - _____ 5. A special room or cell for the queen.
 - _____ 6. Bees, wasps, and ants undergo a complete metamorphosis.
 - _____ 7. The four stages of these insects.
 - _____ 8. The egg, the larva, the pupa, and the adult.
 - _____ 9. The female workers.
 - _____ 10. Workers have many jobs.
 - _____ 11. Collect food and take care of the nest, the queen, and her offspring.
 - _____ 12. Some workers protect the nest from enemies.
 - _____ 13. Search for food to bring back to the colony.
 - _____ 14. Insects' various ways of communication.

► **Writing Link** Write four complete sentences containing both a subject and a predicate.

Lesson 6

Simple and Compound Sentences

A **simple sentence** has one subject and one predicate. However, a simple sentence may have a compound subject, a compound predicate, or both.

Saturn and **Jupiter** are the two largest planets in our solar system. (compound subject)

Queen bees **survive** the winter and **lay** eggs in the spring. (compound predicate)

Juan and **Luis** **throw** and **catch** the softball. (compound subject and compound predicate)

A **compound sentence** contains two or more simple sentences joined by a comma and a coordinating conjunction or by a semicolon. (*and, but, or, nor* or *for*)

Priscilla enjoys reading about technology, **but** she doesn't care for science fiction.

Paramecium are very small; a microscope is needed to examine them.

A **run-on sentence** is two or more sentences incorrectly written as one sentence.

To correct a run-on sentence, divide it into separate sentences or add the necessary words or punctuation to form one complete sentence.

Run-on: The movie was long I got restless.

Corrected: The movie was long. I got restless.

Corrected: The movie was long, and I got restless.

► **Exercise 1** Write **S** in the blank before each simple sentence, **C** before each compound sentence, and **R** before each run-on sentence.

- S The directions are simple and straight-forward.
- _____ 1. Florida and Georgia are the only southern states I've visited, but I've been in every state in New England.
- _____ 2. Skating and skiing are Aaron's favorite cold weather sports.
- _____ 3. Turn right at the stop sign go left at the next corner.
- _____ 4. Six inches of snow are predicted, I'd better find my boots.
- _____ 5. Both Kuma and Angie enjoy hiking and backpacking.
- _____ 6. Try it, you'll like it.
- _____ 7. Liam had a solo in last year's concert; he hopes to have one this year, too.

- _____ 8. Niabi plays both the oboe and the piano and plays them very well.
- _____ 9. George and Helene can't agree on a country for their report, but they want to choose one in Eastern Europe.
- _____ 10. Lately, all of my clothes seem too small.
- _____ 11. The meal ended with carrot cake and tea.
- _____ 12. Why do I have to clean my room and the bathroom?
- _____ 13. I have too many clothes, my closet is stuffed.
- _____ 14. We went to the reptile house, and later we saw the pachyderms.
- _____ 15. I always agree with Marta, and Marta always agrees with me.
- _____ 16. The shelves are filled with books, but I can't find one I want.
- _____ 17. Tia can't come she has to baby-sit.
- _____ 18. Conserve resources, use them wisely.
- _____ 19. Please be kind to Amy; she needs a friend right now.
- _____ 20. Should I take the bus to school, or should I walk?
- _____ 21. Rain forced cancellation of the game, it is rescheduled for next week.
- _____ 22. Beth and Ricardo need a ride to the pep rally tomorrow.
- _____ 23. The storm blew down a tree on our street, but there was no other damage.
- _____ 24. We have a new system for recycling at home.
- _____ 25. Don't use a stapler, use paper clips.
- _____ 26. Look for Jeff and Dominic in the crowd.
- _____ 27. Yoko's aunt lives in California, and her uncle lives in Arizona.
- _____ 28. A canoe is not as stable as a rowboat, be careful not to tip it.
- _____ 29. Terry has just moved here, and she doesn't know very many people.
- _____ 30. The accident ruined the car, fortunately no one was seriously injured.

May 4, 2020

Coronavirus Lockdowns Clear the Air

How is the coronavirus outbreak impacting the environment?

Create Your Blast

How is the coronavirus outbreak impacting the environment?

Remember to use RACE. Restate the question, answer the question, cite your evidence and explain.

(This must be 3 paragraphs with 9-12 words in a sentence.)

Answer the StudySync QuikPoll



What do you think will be the most positive outcome of our global response to the coronavirus outbreak?

- Reduced pollution levels
- Learning how to respond better to future pandemics
- Re-evaluating work-from-home and online learning policies
- More time spent at home learning new hobbies or skills
- More time spent with loved ones and pets

Number Crunch

15,000

Reduced traffic due to shelter-in-place restrictions resulted in approximately 15,000 fewer traffic collisions in March 2020.

StudySync Blast Info



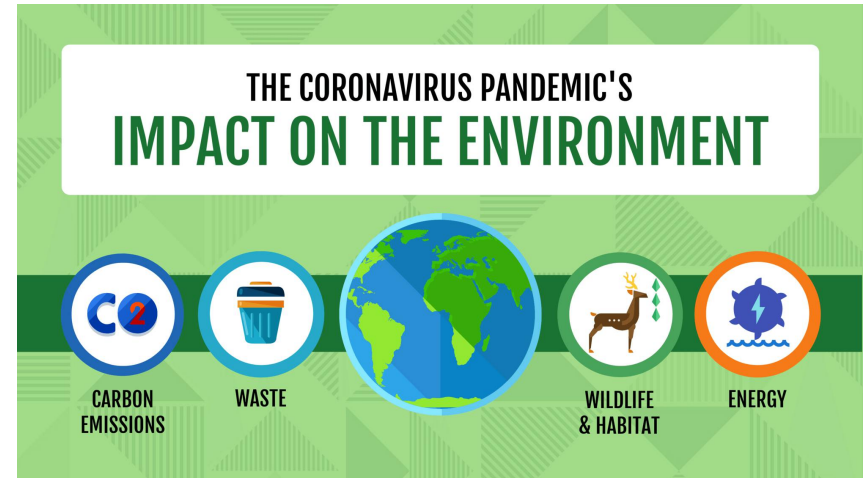
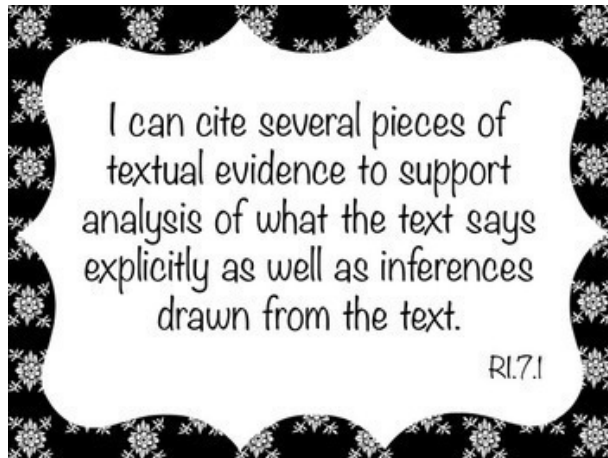
Background

- 1 StudySync adapted the following article from Reuters, a global news website. It was originally published under the headline "Coronavirus lockdowns give Europe's cities cleaner air."
- 2 BRUSSELS (Reuters) -On March 30, 2020, new satellite images showed that air pollution has decreased in urban areas across Europe during lockdowns to combat the coronavirus. But campaigners warned people living in cities were still more vulnerable to the epidemic.
- 3 The Sentinel-5 satellite images captured cities including Brussels, Paris, Madrid, Milan and Frankfurt. These cities showed a reduction in average levels of noxious nitrogen dioxide between March 5 and 25, compared with the same period in 2019.
- 4 That coincides with lockdowns in many European countries which have reduced road transport and slowed output at gas-emitting factories. Road transport is the largest source of nitrogen oxides.
- 5 The new images were released by the European Space Agency (ESA) and analyzed by the non-profit European Public Health Alliance (EPHA). The images show the changing density of nitrogen dioxide like heat maps. Nitrogen dioxide can cause respiratory problems and cancer.
- 6 Daily weather events can influence atmospheric pollution. So, the satellite pictures took a 20-day average and excluded readings where cloud cover reduced the quality of the data.
- 7 Data from the European Environment Agency (EEA) showed a similar trend between March 16 and 22. In Madrid, average nitrogen dioxide levels decreased by 56 percent week-on-week after the Spanish government banned non-essential travel on March 14.
- 8 The EPHA said people living in polluted cities may be more at risk from COVID-19, because prolonged exposure to bad air can weaken the immune system. This can make it harder to fight infection.
- 9 Zoltan Massay-Kosubek is the policy manager for clean air at EPHA. "That connection is very likely," Massay-Kosubek told Reuters. "But because the disease is new, it still has to be demonstrated."
- 10 Air pollution can cause or exacerbate lung cancer, pulmonary disease and strokes.
- 11 China also recorded a drop in nitrogen dioxide pollution in cities during February, when the government imposed severe lockdown measures to contain the raging epidemic.
- 12 In some regions of Poland, however, nitrogen dioxide levels remained relatively high during the period despite its lockdown. This is perhaps due to the popularity of coal-based heating.
- 13 Countries that went into lockdown later look set for a pollution reprieve in coming weeks, EPHA said. One example is Britain, which went into lockdown on March 23.

- 14 Air pollution causes around 400,000 premature deaths each year in Europe, EEA data show.
- 15 (Reporting by Kate Abnett in Brussels; Additional reporting by Agnieszka Barteczko in Warsaw; Editing by Andrew Cawthorne)
- 16 People across Europe are staying at home. They are stopping commutes and unnecessary travel to stop the spread of the coronavirus. As a result, researchers say that levels of dangerous nitrogen dioxide are dropping in the air of locked-down areas. What do you think? How is the coronavirus outbreak impacting the environment?

Write your 3 paragraphs on lined paper and attach it. Use RACE. If you have a printer, you may type it up and attach it. Don't forget to include proper heading with your full name, Core Class and the date.

How is the coronavirus outbreak impacting the environment? (Use RACE)



READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)**Rebuilding China's Empire** (pages 253–256)

Main Idea The Sui and Tang dynasties reunited and rebuilt China after years of war.

After China's Han empire ended in A.D. 220, China had no central government for the next 300 years. It broke into 17 kingdoms. People were very poor, and fighting never stopped. Chinese **warlords**—military leaders who ran these kingdoms—fought each other. At the same time, nomads—groups of people who wander from place to place—took over parts of northern China.

While China was divided and weak, it lost control of some of the groups it had conquered. A group of people who lived on the Korean Peninsula decided to break away from Chinese control. Korea is northeast of China. The people of Korea built their own society and culture.

The Reunification of China China finally became one again in A.D. 581. Wendi, a general, made himself emperor. He won many battles and finally brought China back together. He founded a new line of rulers called the Sui.

After Wendi died, his son Yangdi took his place as emperor. Yangdi wanted to make China bigger. He sent an army to fight the Koreans. The Chinese were badly beaten. Yangdi also took on many large building projects. One project was rebuilding the Great Wall.

Yangdi's biggest job was building the Grand Canal. This waterway connected the Chang Jiang (Yangtze River) and Huang He (Yellow River). The Grand Canal was a major shipping route. It was used to ship products between northern and southern China. It helped make China's economy stronger. An **economy** is a system for producing, selling, and buying things.

Yangdi rebuilt China. But he also made life very hard for the Chinese people. He made farmers work on the

Academic Vocabulary

project: a planned task that has many steps (p. 254)

READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)

Great Wall and the Grand Canal. The people also had to pay for these projects with high taxes. The farmers became so angry that they killed Yangdi and took control of the government. When Yangdi died, the Sui dynasty ended.

The Tang Dynasty In A.D. 618, one of Yangdi's generals made himself emperor. He took over China and set up a new dynasty called the Tang. This dynasty lasted much longer than the Sui. It was in power for about 300 years. The Tang capital of Chang'an was a very big and beautiful city. About one million people lived there.

Tang rulers made a number of **reforms**, or changes, to make China's government stronger. The most powerful Tang emperor was Taizong. He went back to using special tests for government officials. Government officials had to do well on these tests to get their jobs. Their family connections could not get them their jobs. Taizong also gave land to farmers and brought order to the countryside.

During the late A.D. 600s, a woman named Wu became the only woman in Chinese history to rule the country on her own. As a strong leader, Empress Wu made the government bigger. She also made the military stronger.

China grew strong again in Asia under the Tang. It also gained control of a larger area. Tang armies took control of the Silk Road in Tibet. They marched into Korea and forced the Korean kingdoms to pay tribute, or a tax, to China. The Tang also took control of northern Vietnam.

But in the mid-A.D. 700s, the Tang dynasty began to have problems. A new group of wandering people—the Turks you read about earlier—took control of central Asia and the Silk Road. China's economy became weak. Chinese farmers and people in Tibet also revolted. All of these events weakened the Tang. The dynasty ended in A.D. 907.

READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)

The Song Dynasty Military leaders ruled China for the next 50 years. Then a general named Song set himself up as emperor in A.D. 960.

The Song dynasty was in power from A.D. 960 to A.D. 1279. This was a time of great wealth and rich culture. However Song rulers did not have enough soldiers to control their large empire. Tibet broke away, and nomads took over land in northern China. The Song moved their capital south to the city of Hangzhou for safety.

7. What events led to the end of the Tang dynasty?

Buddhism Spreads to China (pages 256–257)

Main Idea Buddhism became popular in China and spread to Korea and Japan.

Traders and missionaries from India brought Buddhism to China in about A.D. 150. At the same time, the Han dynasty was very weak. A short time later, China broke apart. A civil war started. Many people suffered greatly. People died from the war, and from a lack of food and housing. Buddhism taught that people could escape their suffering. To seek peace and comfort, many Chinese became Buddhists.

Chinese Buddhism Early Tang rulers were not Buddhists. They did allow people to practice Buddhism in China. They also allowed people to build Buddhist temples. Many Chinese Buddhists became monks and nuns. They lived in places called **monasteries**. In these religious communities, they prayed and worshiped.

Buddhist temples and monasteries ran schools. They also provided rooms and food for travelers. Buddhist monks served as bankers and gave medical care.

Academic Vocabulary

seek: to look for (p. 256)

Academic Vocabulary

medical: help a doctor gives when one is sick (p. 257)

READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)

Some Chinese did not like Buddhism. Many thought it was wrong for the temples and monasteries to accept money. Others thought that monks and nuns did not encourage respect for families because they did not marry.

In the early A.D. 800s, people in the Tang government feared that Buddhism was gaining too much power. They saw Buddhism as an enemy of Chinese traditions. In A.D. 845, the Tang destroyed many Buddhist monasteries and temples. Buddhism in China was never the same.

Chinese Buddhism Spreads East You already read that Korea broke free from China when the Han dynasty fell. For hundreds of years after A.D. 220, Korea was divided into three separate kingdoms.

In the A.D. 300s, Chinese Buddhists brought their religion to Korea. In about A.D. 660, the Koreans came together to form one country. The new government supported Buddhism.

Buddhism grew even stronger in Korea and spread to the islands of Japan. According to an old story, one of Korea's kings wrote a letter to Japan's emperor. The letter included a statue of Buddha and Buddhist writings. "This religion is the most excellent of all teachings," the king wrote. Over time, Buddhism won many followers in Japan.

8. What events in China attracted many people to Buddhism?

READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)**New Confucian Ideas** (pages 258–259)

Main Idea The Tang dynasty returned to the ideas of Confucius and created a new class of scholar-officials.

You have already read about Confucius and his teachings. Confucius and his followers believed that a good government depended on wise leaders. The tests given for government jobs came from Confucian ideas. The tests were supposed to bring in skilled people for these jobs.

What Is Neo-Confucianism? The Tang dynasty wanted a new kind of Confucianism. They hoped this neo-Confucianism would make Buddhism less popular. It taught that life in this world was just as important as life in the next world. People were expected to take part in this life and help others.

While it criticized some Buddhist ideas, neo-Confucianism did use some Buddhist and Daoist ideas. For many Chinese, Confucianism became more than a list of rules for being good. It became a religion. Confucian thinkers taught that people who followed the teachings would find peace of mind and live at peace with nature.

The Song dynasty, which followed the Tang, also followed neo-Confucianism. It was the main philosophy or belief system for the Song.

Scholar-Officials Neo-Confucianism also helped to make the government stronger. Tang and Song rulers used tests to hire government workers. In the past, jobs had been given to people because of their wealth, family, or friends. Now they based their government system on what people could do.

People taking the tests had to show how much they knew about Confucian writings. To pass, they had to write with style and understanding. The tests were supposed to be fair, but only men could take the tests. Only rich people had enough money to help their sons study for the tests.

READING ESSENTIALS AND STUDY GUIDE 4-1 (continued)

It was very hard to pass the tests. Parents did all they could to help their sons get ready. Beginning at four years old, boys were taught the characters of the Chinese language. Later, they had to memorize all of Confucius's writings. If a student did not do a good job saying the writings from memory, he might be hit by his teacher.

After many years of study, the boys took their tests. Even with all of their work, only one in five boys passed. Boys who failed got jobs helping officials or teaching. They could never get a government job. Through the years, this examination system helped create a new wealthy class in China.

9. Why were the tests such an important part of the government?

READING ESSENTIALS AND STUDY GUIDE 4-2 (continued)**A Growing Economy** (pages 261–262)

Main Idea The Tang dynasty strengthened China's economy by supporting farming and trade.

China's economy suffered when the Han dynasty ended in the A.D. 200s. When the fighting started, cities were ruined and farms were burned. People made fewer goods, and farmers grew fewer crops. Business people had less to trade. Under the Tang dynasty, these problems were solved.

Why Did Farming Improve? The Tang rulers took power in A.D. 618. They brought peace to the countryside and gave more land to farmers. This allowed farmers to improve ways of watering and growing crops. They also grew new kinds of rice that could grow well in poor soil. Farmers could grow more per acre. This rice grew faster and was healthier.

These changes helped farmers grow more and more rice. They also began to grow tea. They made improvements in other crops as well. With more food available, the number of people in China grew. At the same time, more people moved to the south. Rice could grow well in the Chang Jiang valley.

China's Trade Grows Tang rulers also built roads and waterways. Travel in and outside of China became easier. Merchants could increase trade with people in other parts of Asia. The Silk Road was under Tang control, and trade increased.

One of the things they traded was silk fabric. This popular product gave the road its name. China also traded tea, steel, paper, and porcelain. **Porcelain** is made of fine clay and baked at high temperatures. For these Chinese products, other countries traded gold, silver, precious stones, and fine woods.

Academic Vocabulary

available: easy to get (p. 261)

READING ESSENTIALS AND STUDY GUIDE 4-2 (continued)

Other trade routes connected China with central Asia, India, and southwest Asia. The Tang also opened new ports on China's coast to help trade.

6. Why did the population in China grow during the Tang dynasty?
-
-

New Technology *(pages 262–264)*

Main Idea The Chinese developed new technologies, such as steelmaking and printing.

During the Tang and Song dynasties, people made new things that changed life in China. These discoveries would soon spread to other parts of the world.

China Discovers Coal and Steel Up until the Tang dynasty, people burned wood to keep their homes warm and to cook food. When it became hard for people to find wood, the Chinese discovered that coal could be used to heat things. Soon a coal-mining industry was born.

When the Chinese heated coal to make iron, the iron mixed with carbon from the coal. This made a new, stronger metal known today as steel.

The Chinese made steel armor, swords, and helmets for their army. They also made stoves, farm tools, drills, steel chain, steel nails, and sewing needles.

The Printing Process The Chinese also found a new method of printing books. Before this, people had to copy books by hand. This made books cost a lot. Few books were made. The Chinese began printing in the A.D. 600s. They cut the characters of an entire page onto blocks of wood. Then they put ink on the wood block. Next they placed paper on top to make a print. Cutting the block took a long time. But the wood blocks could be used again and again to make copies.


Academic Vocabulary

method: a procedure for doing something (p. 263)

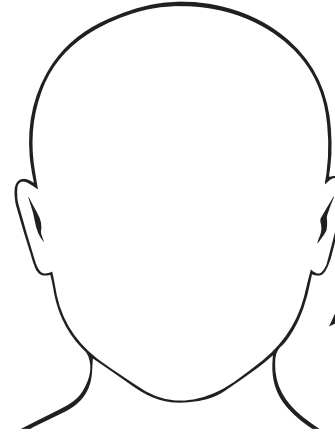
YOU ARE LIVING THROUGH HISTORY RIGHT NOW

TAKE A MOMENT TO FILL IN THESE PAGES FOR YOUR FUTURE SELF TO LOOK BACK ON. AND HERE ARE SOME OTHER IDEAS OF THINGS TO INCLUDE:

- SOME PHOTOS FROM THIS TIME
- ANY ART WORK YOU CREATED
- A JOURNAL OF YOUR DAYS
- FAMILY / PET PICTURES
- LOCAL NEWSPAPER PAGES OR CLIPPING
- SPECIAL MEMORIES

 DRAW A PICTURE OF THE PEOPLE YOU ARE SOCIAL DISTANCING WITH HERE

HOW I'M FEELING



HOW MY FACE LOOKS



I AM MOST THANKFUL FOR

WORDS TO DESCRIBE HOW I FEEL:

WHAT I HAVE LEARNT MOST FROM THIS EXPERIENCE:

THE 3 THINGS I AM MOST EXCITED TO DO WHEN THIS IS OVER:

<p>1 _____</p> <hr/> <hr/> <hr/>	<p>2 _____</p> <hr/> <hr/> <hr/>	<p>3 _____</p> <hr/> <hr/> <hr/>
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YOU ARE NOT STUCK AT HOME,
YOU ARE SAFE AT HOME!



WHAT I AM DOING
TO KEEP BUSY:

SPECIAL OCCASIONS

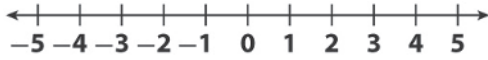
WHAT OCCASIONS DID YOU CELEBRATE DURING THIS TIME?
WRITE THE LIST DOWN HERE AND WHAT YOU DID TO CELEBRATE
(E.G. ST. PATRICK'S DAY, EASTER, BIRTHDAYS, ANNIVERSARIES)

EVENT	DATE	HOW YOU CELEBRATED

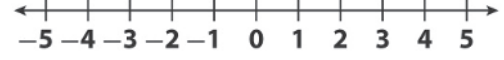
LESSON
1-2**Adding Integers with Different Signs****Practice and Problem Solving: A/B**

Show the addition on the number line. Find the sum.

1. $2 + (-3)$ _____



2. $-3 + 4$ _____



Find each sum.

3. $-4 + 9$

4. $7 + (-8)$

5. $-2 + 1$

6. $6 + (-9)$

7. $5 + (-7)$

8. $9 + (-5)$

9. $(-1) + 9$

10. $9 + (-7)$

11. $50 + (-7)$

12. $27 + (-6)$

13. $1 + (-30)$

14. $15 + (-25)$

Solve.

15. The temperature outside dropped 13°F in 7 hours. The final temperature was -2°F . What was the starting temperature?

16. A football team gains 8 yards in one play, then loses 5 yards in the next. What is the team's total yardage for the two plays?

17. Matt is playing a game. He gains 7 points, loses 10 points, gains 2 points, and then loses 8 points. What is his final score?

18. A stock gained 2 points on Monday, lost 5 points on Tuesday, lost 1 point on Wednesday, gained 4 points on Thursday, and lost 6 points on Friday.

a. Was the net change for the week positive or negative? _____

b. How much was the gain or loss? _____

LESSON

1-2

Adding Integers with Different Signs**Practice and Problem Solving: C**

Tell whether each sum will be positive or negative. Then find each sum.

1. $-3 + (-7)$

2. $14 + (-9)$

3. $-12 + 5$

4. $-3 + 8$

5. $11 + (-5)$

6. $7 + 8$

7. $-8 + 7$

8. $-2 + 3$

9. If two integers have the same sign, what is the sign of their sum?

10. When adding two integers with different signs, how do you find the sign?

Evaluate $a + b$ for the given values.

11. $a = 9, b = -24$

12. $a = -17, b = -7$

13. $a = 32, b = -19$

14. $a = -15, b = -15$

15. $a = -20, b = 20$

16. $a = -30, b = 12$

Solve.

17. The high temperature for the day dropped 7°F between Monday and Tuesday, rose 9°F on Wednesday, dropped 2°F on Thursday, and dropped 5°F on Friday. What was the total change in the daily high temperature from Monday to Friday?

18. Karen deposited \$25 in the bank on Monday, \$50 on Wednesday and \$15 on Friday. On Saturday, she took out \$40. Karen's original balance was \$100. What is her balance now?

19. Lance and Rita were tied in a game. Then Lance got these scores: 19, -7 , 3, -11 , 5. Rita got these scores: 25, -9 , 5, -9 , 8. Who had the higher score? How much higher was that higher score?

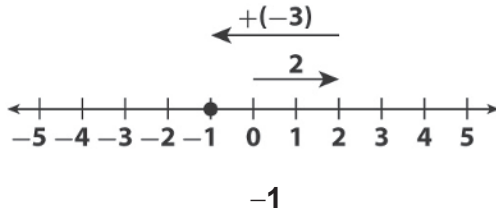
LESSON
1-2

Adding Integers with Different Signs

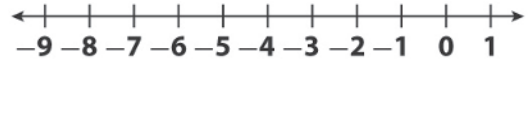
Practice and Problem Solving: D

Show the addition on the number line. Then write the sum. The first one is done for you.

1. $2 + (-3)$



2. $-3 + (-4)$



Find each sum. The first one is done for you.

3. $4 + (-9)$

-5

4. $7 + (-8)$

5. $-2 + 1$

6. $5 + 7$

7. $9 + (-5)$

8. $-1 + 9$

9. $2 + (-7)$

10. $-6 + (-4)$

11. $-15 + 9$

Solve. The first one is done for you.

12. The temperature dropped 12°F in 8 hours. If the final temperature was -7°F , what was the starting temperature?

5°F

13. At 3 P.M., the temperature was 9°F . By 11 P.M., it had dropped 31°F . What was the temperature at 11 P.M.?

14. A submarine submerged at a depth of -40 feet dives 57 feet more. What is the new depth of the submarine?

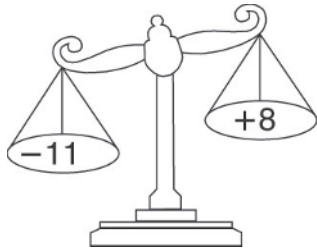
15. An airplane cruising at 20,000 feet drops 2,500 feet in altitude. What is the airplane's new altitude?

LESSON
1-2

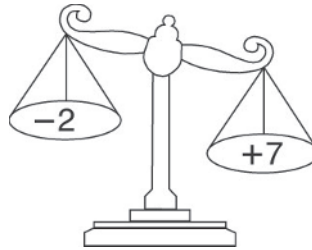
Adding Integers with Different Signs

Reteach

This balance scale “weighs” positive and negative numbers. Negative numbers go on the left of the balance, and positive numbers go on the right.



Find $-11 + 8$.
The scale will tip to the left side because the sum of -11 and $+8$ is negative.
 $-11 + 8 = -3$



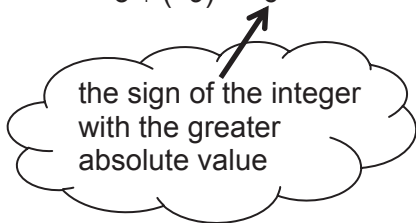
Find $-2 + 7$.
The scale will tip to the right side because the sum of -2 and $+7$ is positive.
 $-2 + 7 = 5$

Find $3 + (-9)$.

- Should you add or subtract 3 and 9? Why?

- Is the sum positive or negative? _____

$$3 + (-9) = -6$$



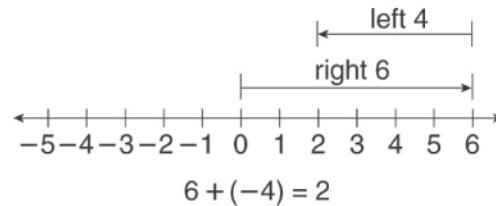
Find the sum.

- | | | |
|------------------------|------------------------|--------------------------|
| 3. $7 + (-3) =$ _____ | 4. $-2 + (-3) =$ _____ | 5. $-5 + 4 =$ _____ |
| 6. $-3 + (-1) =$ _____ | 7. $-7 + 9 =$ _____ | 8. $4 + (-9) =$ _____ |
| 9. $16 + (-7) =$ _____ | 10. $-21 + 11 =$ _____ | 11. $-12 + (-4) =$ _____ |

- When adding 3 and -9 , how do you know that the sum is negative?

LESSON
1-2**Adding Integers with Different Signs****Reading Strategies: Use Graphic Aids**

Randy's football team had the ball on its own zero yard line. On their first play they gained 6 yards. On the second play they lost 4 yards. On what yard line is the ball now?



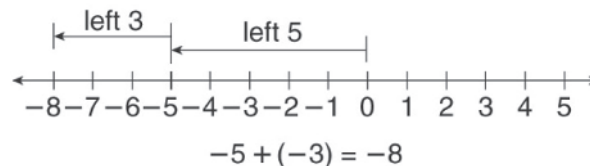
Use the number line to help you answer the questions.

1. On which number do you begin? _____
2. In which direction do you move first? How many places do you move?

3. In which direction do you move next? How many places do you move?

4. At which number do you end up? _____

The temperature was zero degrees. Two hours later, the temperature went down 5 degrees. Then, the temperature went down another 3 degrees. What was the final temperature?



Use the number line to help you answer the questions.

5. On which number do you begin? _____
6. In which direction do you move first? How many spaces?

7. In which direction do you move next? How many spaces?

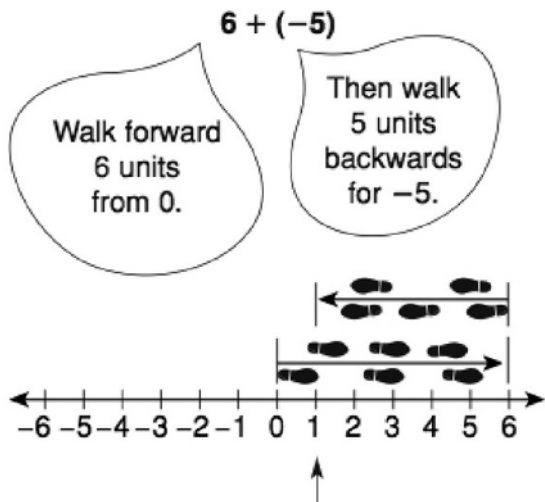
8. At which number do you end up? _____

LESSON
1-2

Adding Integers with Different Signs

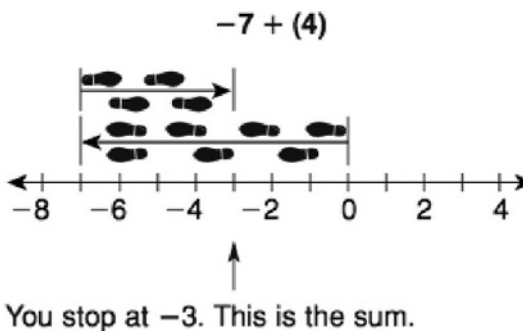
Success for English Learners

Problem 1



You stop at 1. This is the sum.

Problem 2



1. The sum of $x + y$ is to the left of x on a number line. Is y a positive number or a negative number?

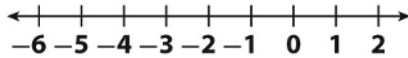
2. Based on Problems 1 and 2, does the addition of integers always mean the sum is positive? Explain.

3. Is the sum of $3 + (-9)$ positive or negative?

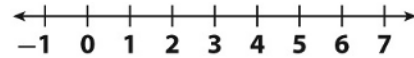
4. Is the sum of $13 + (-11)$ positive or negative?

LESSON
1-3**Subtracting Integers****Practice and Problem Solving: A/B****Show the subtraction on the number line. Find the difference.**

1. $-2 - 3$



2. $5 - (-1)$



Find the difference.

3. $-6 - 4$

4. $-7 - (-12)$

5. $12 - 16$

6. $5 - (-19)$

7. $-18 - (-18)$

8. $23 - (-23)$

9. $-10 - (-9)$

10. $29 - (-13)$

11. $9 - 15$

12. $-12 - 14$

13. $22 - (-8)$

14. $-16 - (-11)$

Solve.

15. Monday's high temperature was 6°C . The low temperature was -3°C .
What was the difference between the high and low temperatures?

16. The temperature in Minneapolis changed from -7°F at 6 A.M. to 7°F at noon. How much did the temperature increase?

17. Friday's high temperature was -1°C . The low temperature was -5°C .
What was the difference between the high and low temperatures?

18. The temperature changed from 5°C at 6 P.M. to -2°C at midnight. How much did the temperature decrease?

19. The daytime high temperature on the moon can reach 130°C . The nighttime low temperature can get as low as -110°C . What is the difference between the high and low temperature?

LESSON
1-3**Subtracting Integers****Practice and Problem Solving: C**

For each set of values find $x - y$. Answer the questions that follow.

1. $x = 14, y = -2$

2. $x = -11, y = 11$

3. $x = -8, y = -15$

4. $x = -9, y = -9$

5. $x = 9, y = -20$

6. $x = 0, y = -9$

7. $x = 9, y = 11$

8. $x = -1, y = -1$

9. $x = -5, y = 5$

10. If x and y are both positive, when is $x - y$ negative? _____11. If x and y are both negative, when is $x - y$ positive? _____**Solve.**

12. The temperature changed from 7°F at 6 P.M. to -5°F at midnight. What was the difference between the high and low temperatures? What was the average change in temperature per hour?

13. The lowest point in the Pacific Ocean is about $-11,000$ meters. The lowest point in the Atlantic Ocean is about $-8,600$ meters. Which ocean has the lower point? How much lower?

14. At 11,560 feet above sea level, Climax, Colorado, is the highest town in the United States. The lowest town is Calipatria, California, at 185 feet below sea level. Express both of these distances as integers and tell which is closer to sea level. How much closer to sea level is the town that is closer?

Use the table for 15–16.

Temperatures at a Ski Resort

Day	High	Low
Saturday	8°F	-3°F
Sunday	6°F	-2°F

15. On which day was the difference in temperature greater? _____

16. How much greater was the difference one day than the other? _____

LESSON
1-3

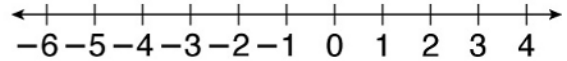
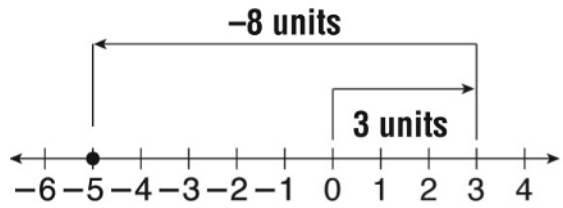
Subtracting Integers

Practice and Problem Solving: D

Show the subtraction on the number line. Then write the difference.
The first one is done for you.

1. $3 - 8$

2. $-5 - (-1)$



-5

Find each difference. The first one is done for you.

3. $-3 - 4$

4. $-7 - (-2)$

5. $12 - 6$

-7

6. $-8 - 8$

7. $-5 - (-5)$

8. $-1 - (-2)$

9. $8 - 1$

10. $7 - (-9)$

11. $-3 - 8$

Solve. The first one is done for you.

12. The daytime temperature on the planet Mercury can reach 430°C . The nighttime temperature can drop to -180°C . What is the difference between these temperatures?

610°C

13. An ice cream company made a profit of \$24,000 in 2011. The same company had a loss of \$11,000 in 2012. What is the difference between the company's financial results for 2011 and 2012?

14. The high temperature on Saturday day was 6°F . The low temperature was -3°F . What was the difference between the high and low temperatures for the day?

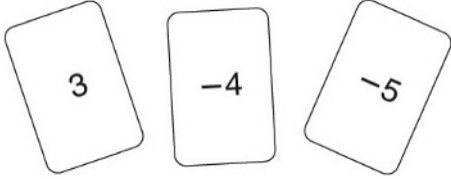
LESSON
1-3

Subtracting Integers

Reteach

The total value of the three cards shown is -6 .

$$3 + (-4) + (-5) = -6$$



What if you take away the 3 card?

Cards -4 and -5 are left. The new value is -9 .

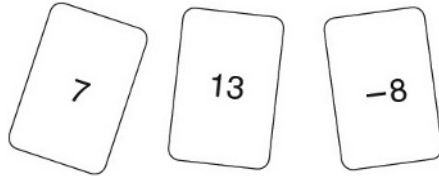
$$-6 + -(3) = -9$$

What if you take away the -4 card?

Cards 3 and -5 are left. The new value is -2 .

$$-6 - (-4) = -2$$

Answer each question.



1. Suppose you have the cards shown.
The total value of the cards is 12.

a. What if you take away the 7 card? $12 - 7 =$ _____

b. What if you take away the 13 card? $12 - 13 =$ _____

c. What if you take away the -8 card? $12 - (-8) =$ _____

2. Subtract $-4 - (-2)$.

a. $-4 < -2$. Will the answer be positive or negative? _____

b. $|4| - |2| =$ _____

c. $-4 - (-2) =$ _____

Find the difference.

3. $31 - (-9) =$ _____

4. $15 - 18 =$ _____

5. $-9 - 17 =$ _____

6. $-8 - (-8) =$ _____

7. $29 - (-2) =$ _____

8. $13 - 18 =$ _____

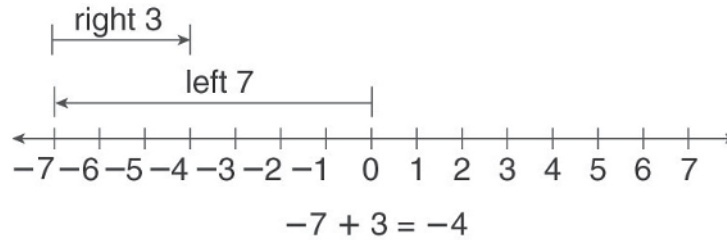
LESSON
1-3

Subtracting Integers

Reading Strategies: Use Graphic Aids

Brett borrowed \$7 from his father to buy a cap. He paid back \$3. How much money does Brett have now?

A number line can help you picture this situation.

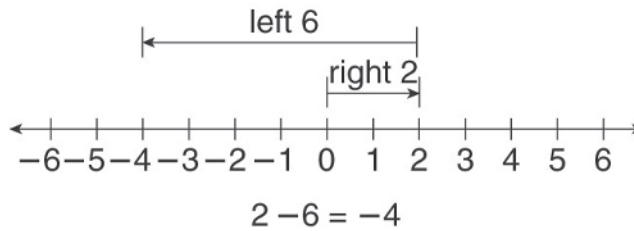


1. Beginning at 0, in which direction will you move first? _____
2. How many places? _____
3. In which direction do you move next? _____
4. How many places? _____
5. On what number do you end? _____

Brett does not have any more money. He owes his dad \$4. He has negative \$4.

Sally and her friends made up a game with points. You can either win or lose up to ten points on each round of the game. After the first round, Sally's team had 2 points. In the second round, they lost 6 points. By how many points was Sally's team down after the second round?

The number line will help you picture the problem.



6. Beginning at 0, in which direction will you move first? How many places?

7. Which direction will you move next? How many places?

8. On what number do you end? _____

LESSON
1-3

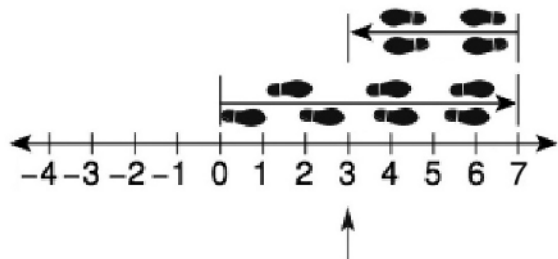
Subtracting Integers

Success for English Learners

Problem 1

What is the difference?

$$7 - 4$$

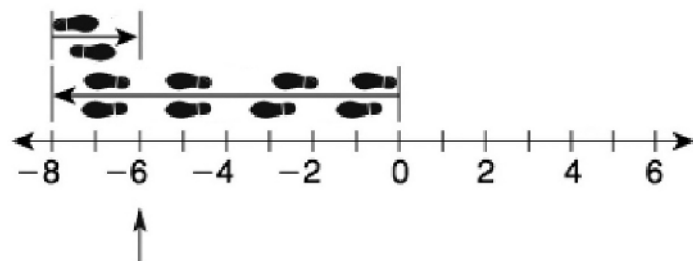


You stop at 3. This is the difference.

Problem 2

What is the difference?

$$-8 - (-2)$$



You stop at -6. This is the difference.

1. If $x > 0$ and $x > y$, is the difference $x - y$ positive or negative?

2. If $x > 0$ and $y > x$, is the difference $x - y$ positive or negative?

Rocks

A rock is made of two or more minerals. Rocks are named by how they are formed. There are three types of rocks. Igneous rocks are formed when volcanoes erupt and magma flows to the earth's surface. New rocks can also be made from weathering and erosion. Rain, wind, and running water cause rocks to break down a little bit at a time. These rock pieces fall to the bottom of the lake or oceans they run into. Over time the layers of sand and mud at the bottom of lakes and oceans turn into sedimentary rocks. Metamorphic rocks are rocks that have changed because of heat and pressure.

Rocks are constantly changing, because after they form, they wear down and then form again. This process is called the rock cycle. Rocks can be weathered by wind, water, and ice.

Rocks

Answer each question in a complete sentence. Underline or highlight where you located the answer in the text.

1. Why are rocks constantly changing? _____

2. How are rocks named? _____

3. What are igneous rocks? _____

4. How are sedimentary rocks formed? _____

5. Write a paragraph to describe how one type of rock can change to a different type of rock.

Name _____

Date _____

Rocks and Minerals

A	S	M	I	Y	E	I	C	S	H	O	G	L	H	N
A	R	I	B	T	K	R	K	A	R	O	R	N	O	
S	E	N	L	I	Y	D	R	I	M	T	S	I	E	N
K	T	E	M	S	E	D	I	M	E	N	T	A	R	Y
T	S	R	T	N	E	N	O	I	T	C	A	P	M	O
N	U	A	W	E	A	T	H	E	R	I	N	G	S	R
E	L	L	S	D	K	Y	L	T	E	R	E	L	S	I
M	I	S	I	A	N	C	N	E	A	C	S	N	O	C
I	A	N	E	M	Y	E	C	C	O	M	E	N	I	N
D	M	R	M	C	C	O	L	P	O	R	S	H	I	N
E	T	C	C	K	N	O	P	P	P	M	N	C	I	A
S	K	C	O	L	B	G	N	I	D	L	I	U	B	A
A	O	C	I	H	P	R	O	M	A	T	L	E	M	A
R	D	N	O	M	A	I	D	T	R	W	L	K	N	E
I	G	N	E	O	U	S	N	M	S	O	A	D	A	I

Color

Crystal

Erosion

Igneous

Melt

Press

Talc

Heat

Luster

Density

Streak

Magma

Building Blocks Cooling

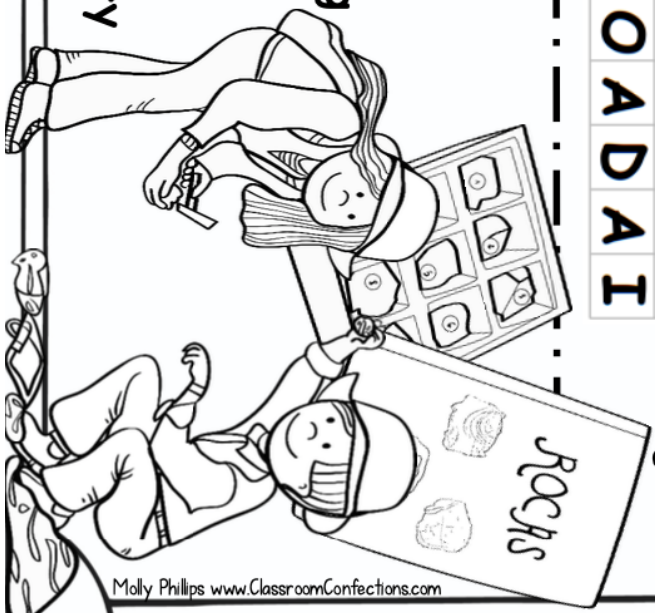
Compaction Diamond

Hardness Weathering

Metamorphic Minerals

Rock Cycle Sediment

Concentration Sedimentary



Fossils

Fossils are the remains of plants and animals. All fossils were formed at least 10,000 years ago. They can tell us many things about plants and animals from long ago.

Body fossils are the remains of a plant or animal's body. For an animal to become a fossil, it would have been quickly buried after its death. Sediments would cover the remains. The parts of the animals that didn't decay would be buried. After a long time, the minerals would replace the bone. Other small body fossils are found in amber, a hardened form of tree sap. Trace fossils are the remains of an animal, such as footprints and nests. An imprint is a mold of a leaf or other thin object.

A paleontologist is a scientist who studies fossils. They can use fossils to find how an animal looked and lived. They can build the skeletons of dinosaurs to show how large the animal was and how it moved. The skeletons can also tell us the types of food the animals ate.

Fossils

Answer each question in a complete sentence. Underline or highlight where you located the answer in the text.

1. Who are fossils? _____

2. What are body fossils? _____

3. What is amber? _____

4. Who is a paleontologist? _____

5. In a paragraph, describe what we can learn from fossils.

Name _____

Date _____

F O S S I L S

D	T	I	E	S	T	Y	N	E	A	P	S	P	Y
A	I	M	E	F	D	D	E	V	R	E	S	R	P
T	S	I	G	O	L	O	T	N	O	E	L	A	P
D	D	L	B	O	I	M	P	R	I	N	T	I	S
O	D	E	L	M	T	S	L	A	R	R	E	M	X
L	A	I	O	F	I	P	P	U	D	E	R	O	C
A	A	O	E	F	R	P	P	A	I	R	M	B	A
K	E	N	D	E	N	T	R	E	S	T	O	A	N
Y	L	I	O	S	D	E	N	T	E	S	T	O	A
N	P	L	A	O	R	S	S	A	C	C	P	L	S
P	R	C	V	A	N	T	S	A	C	P	S	I	A
E	R	C	V	A	N	T	S	A	C	P	S	I	A
D	F	I	P	S	L	E	R	B	F	E	A	F	L

- Fossils
- Animals
- Plants
- Dies
- Remains
- Covered Up
- Millions
- Pressure
- Minerals
- Rock
- Bones
- Teeth
- Cast
- Imprint
- Mold
- Body

- Fragile
- Petrified
- Trace
- Resin
- Amber
- Excavate
- Preserved
- Paleontologist
- Sedimentary
- Clues
- Past Life
- Footprints
- Long Ago
- Dinosaurs
- Land
- Sea

