1. Josiah and Tillery have new jobs at YumYum's Ice Cream Parlor. Josiah is Tillery's manager. In their first year, Josiah will be paid $14 per hour, and Tillery will be paid $7 per hour. They have been told that after every year with the company, they will each be given a raise of $2 per hour. Is the relationship between Josiah's pay and Tillery's pay rate proportional? Explain your reasoning using a table.

2. A recent study claimed that in any given month, for every 5 text messages a boy sent or received, a girl sent or received 7 text messages. Is the relationship between the number of text messages sent or received by boys proportional to the number of text messages sent or received by girls? Explain your reasoning using a graph on the coordinate plane.

3. When a song is sold by an online music store, the store takes some of the money, and the singer gets the rest. The graph below shows how much money a pop singer makes given the total amount of money brought in by one popular online music store from sales of the song.
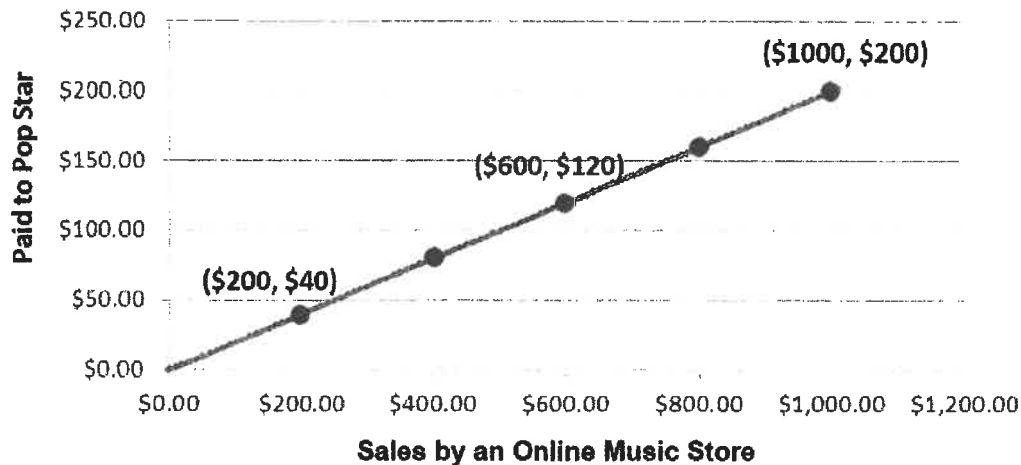


a. Identify the constant of proportionality between dollars earned by the pop singer and dollars brought in by sales of the song.

b. ite an equation relating dollars earned by the pop singer, $y$, to dollars brought in by sales of the song, $x$.

c. According to the proportional relationship, how much money did the song bring in from sales in the first week if the pop star earned $800 that week?

d. Describe what the point (0,0) on the graph represents in terms of the situation being described by the graph.

e. Which point on the graph represents the amount of money the pop singer gets for $1 in money brought in from sales of the song by the store?

4. It is a Saturday morning, and Jeremy has discovered he has a leak coming from the water heater in his attic. Since plumbers charge extra to come out on weekends, Jeremy is planning to use buckets to catch the dripping water. He places a bucket under the drip and steps outside to walk the dog. In half an hour, the bucket is $\frac{1}{5}$ of the way full.

a. What is the rate at which the water is leaking per hour?

b. Write an equation that represents the relationship between the number of buckets filled, $y$, in $x$ hours.

c. What is the longest that Jeremy can be away from the house before the bucket will overflow?

5. What value of $a$ will make the equation a true statement? Explain how you arrived at your solution.

$$\left(-\frac{3}{4}+\frac{4}{3}\right) + a = 0$$

6. Every month, Ms. Thomas pays her car loan through automatic payments (withdrawals) from her savings account. She pays the same amount on her car loan each month. At the end of the year, her savings account balance changed by −$2,931 from payments made on her car loan.

a. What is the change in Ms. Thomas' savings account balance each month due to her car payment?

7. The water level in Ricky Lake changes at an average of $-\frac{7}{16}$ inch every 3 years.

a. Based on the rate above, how much will the water level change after one year? Show your calculations and model your answer on the vertical number line, using 0 as the original water level.



```
0  ┼------------Original Water Level
   |                (in inches)
   |
-0.1┼
   |
-0.2┼
   ↓
```
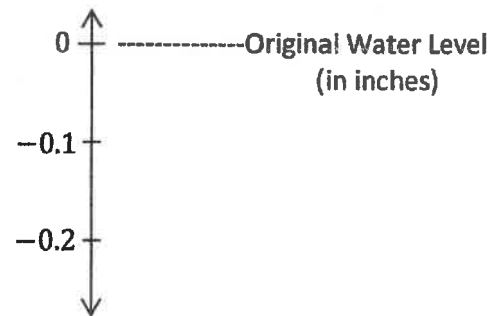
b. How much would the water level change over a 7-year period?

c. When written in decimal form, is your answer to part (b) a repeating decimal or a terminating decimal? Justify your answer using long division.

8. Kay's mother taught her how to make handmade ornaments to sell at a craft fair. Kay rented a table at the fair for $30 and set up her work station. Each ornament that she makes costs approximately $2.50 for materials. She sells each ornament for $6.00.

a. If $x$ represents the number of ornaments sold at the craft fair, which of the following expressions would represent Kay's profit? (Circle *all* choices that apply.)

A. $-30 + 6x - 2.50x$

B. $6x - 30 - 2.50x$

C. $6x - 30$

D. $4.50x - 30$

E. $3.50x - 30$

b. Kay does not want to lose money on her business. Her mother told her she needs to sell enough ornaments to at least cover her expenses (costs for materials and table rental). Kay figures that if she sells 8 ornaments, she covers her expenses and does not lose any money. Do you agree? Explain and show work to support your answer.

c.  Kay feels that if she earns a profit of $40.00 at this craft fair, her business will be successful enough for her to branch out to other craft fairs. How many ornaments does she have to sell to earn a $40.00 profit? Write and solve an equation; then explain how the steps and operations used in your algebraic solution compare to an arithmetic solution.

9. Travis received a letter from his bank saying that his checking account balance fell below zero.

His account transaction log is shown below.

| CHECK NO. | DATE | DESCRIPTION OF TRANSACTION | PAYMENT | DEPOSIT | BALANCE | |
|---|---|---|---|---|---|---|
| --- | 10/17 | Beginning Balance | --- | --- | $367.50 | |
| 1125 | 10/18 | CBC Audio (Headphones) | $62.00 | | −62.00 | |
| | | | | | $305.50 | Line 1 |
| 1126 | 10/22 | NY Sport (Basketball Shoes) | $87.00 | | −87.00 | |
| | | | | | $218.50 | Line 2 |
| Debit | 10/25 | Gary's Country Market | $38.50 | | −38.50 | |
| | | | | | $180.00 | Line 3 |
| 1127 | 10/25 | Iggy's Skate Shop (Skateboard) | $188.00 | | −188.00 | |
| | | | | | $8.00 | Line 4 |
| | 10/25 | Cash Deposit (Birthday Money) | | $20.00 | +20.00 | |
| | | | | | $28.00 | Line 5 |
| Debit | 10/30 | McDonuts | $5.95 | | −5.95 | |
| | | | | | $22.05 | Line 6 |

a.  On which line did Travis make a mathematical error? Explain Travis's mistake.

b.  The bank charged Travis a $20 fee because his balance dropped below $0. He knows that he currently has an outstanding charge for $7.85 that he has not recorded yet. How much money will Travis have to deposit into his account so that the outstanding charge does not create another bank fee? Explain.

b.  Describe the total change to Ms. Thomas' savings account balance after making six monthly payments on her car loan. Model your answer using a number sentence.

10.  Use the expression below to answer part (a)
$$4x - 3(x - 2y) + \frac{1}{2}(6x - 8y)$$

a.  Write an equivalent expression in standard form, and collect like terms.

11. Use the information to solve the problems below.

   b. The longest side of a triangle is six more units than the shortest side. The third side is twice the length of the shortest side. If the perimeter of the triangle is 25 units, write and solve an equation to find the lengths of all three sides of the triangle.

   c. The length of a rectangle is $(x + 3)$ inches long, and the width is $3\frac{2}{5}$ inches. If the area is $15\frac{3}{10}$ square inches, write and solve an equation to find the length of the rectangle.

   d.

12. In August, Cory begins school shopping for his triplet daughters.

   e. One day, he bought 10 pairs of socks for $2.50 each and 3 pairs of shoes for $d$ dollars each. He spent a total of $135.97. Write and solve an equation to find the cost of one pair of shoes.

   f. The following day Cory returned to the store to purchase some more socks. He had $40 to spend. When he arrived at the store, the shoes were on sale for $\frac{1}{3}$ off. What is the greatest amount of pairs of socks Cory can purchase if he purchases another pair of shoes in addition to the socks?

13. Ben wants to have his birthday at the bowling alley with a few of his friends, but he can spend no more than $80. The bowling alley charges a flat fee of $45 for a private party and $5.50 per person for shoe rentals and unlimited bowling.

   a. Write an inequality that represents the total cost of Ben's birthday for $p$ people given his budget.

   b. How many people can Ben pay for (including himself) while staying within the limitations of his budget?

   c. Graph the solution of the inequality from part (a).

14. Kacey and her three friends went out for lunch, and they wanted to leave a 15% tip. The receipt shown below lists the lunch total before tax and tip. The tip is on the cost of the food plus tax. The sales tax rate in Pleasantville is 8.75%.

   a. Use mental math to estimate the approximate total cost of the bill including tax and tip to the nearest dollar. Explain how you arrived at your answer.

```
SAM'S WORLD FAMOUS BURGER
        1522 OAK ROAD
     PLEASANTVILLE, USA

BBQ BURGER W/CHEESE          9.99
CHICKEN FINGER BASKE         8.99
MUSHROOM BURGER             10.99
CHILI CHEESE FRIES           8.99

            TOTAL: $38.96

  THANKS FOR YOUR BUSINESS.
     FOLLOW US ONLINE!

     WWW.CUSTOMRECEIPT.COM
```

b. Find the actual total of the bill including tax and tip. If Kacey and her three friends split the bill equally, how much will each person pay including tax and tip?

15. Cool Tees is having a Back to School sale where all t-shirts are discounted by 15%. Joshua wants to buy five shirts: one costs $9.99, two cost $11.99 each, and two others cost $21.00 each.

a. What is the total cost of the shirts including the discount?

b. By law, sales tax is calculated on the discounted price of the shirts. Would the total cost of the shirts including the 6.5% sales tax be greater if the tax was applied before a 15% discount is taken, rather than after a 15% discount is taken? Explain.

c. Joshua remembered he had a coupon in his pocket that would take an additional 30% off the price of the shirts. Calculate the new total cost of the shirts including the sales tax.

d. If the price of each shirt is 120% of the wholesale price, write an equation and find the wholesale price for a $21 shirt.

16. The water level in a swimming pool increased from 4.5 feet to 6 feet. What is the percent increase in the water level rounded to the nearest tenth of a percent? Show your work.

Round all decimal answers to the nearest hundredth.

17. Each student in a class of 38 students was asked to report how many siblings (brothers and sisters) he has. The data are summarized in the table below.

| Number of Siblings | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| Count | 8 | 13 | 12 | 3 | 1 | 0 | 1 |

a. Based on the data, estimate the probability that a randomly selected student from this class is an only child.

b. Based on the data, estimate the probability that a randomly selected student from this class has three or more siblings.

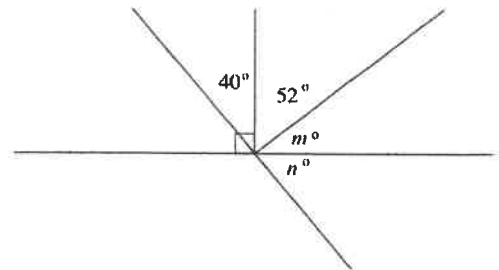18. In each problem, set up and solve an equation for the unknown angles.

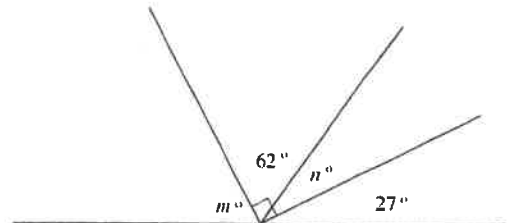    a. Four lines meet at a point. Find the measures $m°$ and $n°$.
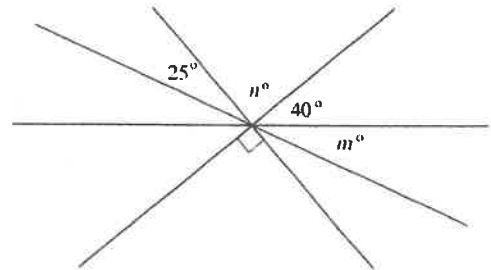
    b. Two lines meet at the vertex of two rays. Find the measures $m°$ and $n°$.
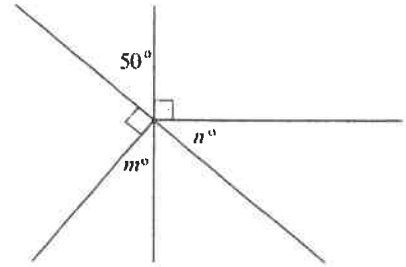
    c. Two lines meet at a point that is the vertex of two rays. Find the measures $m°$ and $n°$.

    g.  Three rays have a common vertex on a line. Find the measures $m°$ and $n°$.

19. Use tools to construct a triangle based on the following given conditions.

    a. If possible, use your tools to construct a triangle with angle measurements 20°, 55°, and 105°, and leave evidence of your construction. If it is not possible, explain why.

b. Is it possible to construct two different triangles that have the same angle measurements? If it is, construct examples that demonstrate this condition, and label all angle and length measurements. If it is not possible, explain why.

20. In each of the following problems, two triangles are given. For each: (1) state if there are sufficient or insufficient conditions to show the triangles are identical, and (2) explain your reasoning.
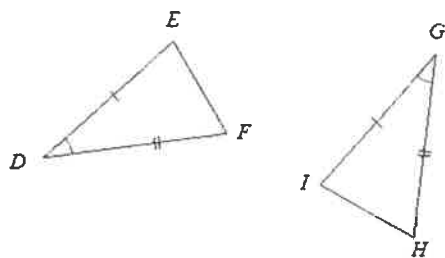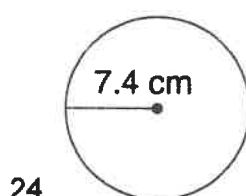
a.
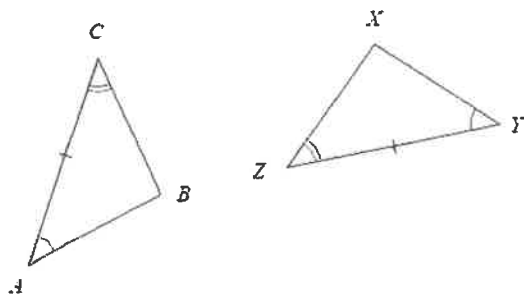


b.
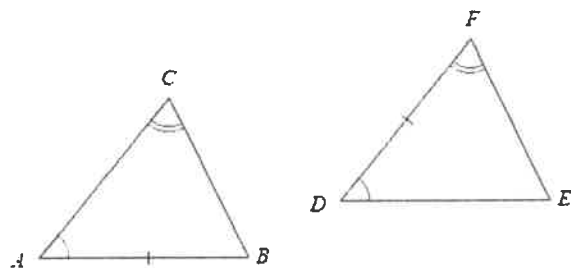


c.

21. A circular patio has a diameter of 35 yards. What is the circumference of the patio? Use $\frac{22}{7}$ for $\pi$.

_____

22. A paper plate has a diameter of 9 inches. What is the circumference of the plate? Use $\frac{22}{7}$ for $\pi$.


Find the area of each circle.  Round to the nearest tenth.  Use 3.14 for $\pi$.

23.

2 cm

24.

7.4 cm
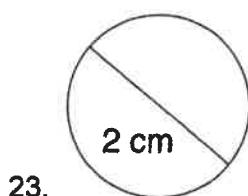

25.  A vanilla cake has a diameter of 8 inches. A chocolate cake has a diameter of 10 inches. What is the difference in area between the top surfaces of the two cakes? Use 3.14 for $\pi$.

_____

# COMPUTATION PRACTICE (DO NOT USE A CALCULATOR)

**Find each sum.**

1. $-7 + (-1) =$ _____

2. $-5 + (-4) =$ _____

3. $-36 + (-17) =$ _____

4. $-51 + (-42) =$ _____

5. $-4 + 9 =$ _____

6. $6 + (-9) =$ _____

7. $5 + (-7) =$ _____

8. $(-1) + 9 =$ _____

**Find the difference.**

9. $-6 - 4 =$ _____

10. $-7 - (-12) =$ _____

11. $12 - 16 =$ _____

12. $5 - (-19) =$ _____

13. $-18 - (-18) =$ _____

14. $23 - (-23) =$ _____

Find each product.

15. $(-4)(7) = $ _____

16. $(-3)(-4) = $ _____

17. $(6)(-6) = $ _____

17. $40(-78)(0) = $ _____

18. $-6(-60)(-4) = $ _____

19. $-24(7)(-7) = $ _____

**Find each quotient.**

20. $7\overline{)-84}$

21. $-38 \div -2$

22. $-27\overline{)81}$

_____

_____

_____

23. $-28 \div 7$

24. $-121 \div -11$

25. $-35 \div 4$

_____

_____

_____

**Simplify.**

26. $(-6 - 4) \div 2$

27. $5(-8) \div 4$

28. $-6(-2) \div 4(-3)$

29. $-\dfrac{3}{4} + \dfrac{1}{5}$

30. $-2\dfrac{1}{4} - (-3)$

31. $\left(\dfrac{2}{3}\right) \times (-6) \times 5$

32. $\dfrac{1}{2} \div (-3)$

33. $24 \div (-3.2)$

34. $\dfrac{\left(\dfrac{3}{2}\right)}{\left(-\dfrac{9}{8}\right)} =$

# Protect Your Privacy Online
by Kathiann M. Kowalski

**Keep personal information private-for your own good!**

High school sophomore Karra H. never expected to see herself on a Web site featuring scantily clad teens. Yet there she was, wearing a bikini while holding a suggestive cheerleading pose.

The site's anonymous owner got most of the photos from teens' social media pages. While Nancy McBride at the National Center for Missing & Exploited Children feels the actions of the site's creator were wrong, she warns teens against posting revealing images in the first place. "Once it's out there, it's out there forever," says McBride. "Somebody else can go out there and grab it." In other words, protecting privacy starts with you.

**Watch Out for Strangers-And 'Friends'**

In Karra's case, the unknown Web site operator didn't contact Karra or use online information to track her down in real life. Strangers rarely physically assault teens they find or connect with online, but it has happened.



Jochen Luebke/Newscom

When some female friends told 17-year-old Eric M. in Utah that they had chatted online with unknown adults, he urged them to stop. "There are child molesters, and there are a lot of crazies out on the Internet," says Eric. "If you don't know someone, don't talk to them."

More often, teens hurt one another-or themselves. Cyberbullying can be both nasty and illegal. One 19-year-old New Jersey college student faced criminal charges after he tweeted about watching a roommate's romantic date via Webcam. Other teens use cell phone cameras and social media sites to share photos of their own private moments or illegal activities, such as underage drinking. Even if charges don't result, embarrassment can follow.

"One of the biggest mistakes that teens make is believing that the information that they post is private and just amongst their friends," explains Michelle Boykins at the National Crime Prevention Council.

Anyone can copy and resend material. There's even less control over "friends of friends."

## Identity Theft Happens

Teens are also targets for identity theft-the use of someone's personal information for fraud or crime. Last year about 8 percent of reported identity theft cases in the U.S. involved teen victims, says attorney Steven Toporoff at the Federal Trade Commission. That's roughly 18,000 cases. Adults in their 20s make up the biggest group of victims.

"Neglecting potential identity theft could really come back to bite you," stresses Toporoff. Many teens discover identity theft only later, when they apply for college loans or auto loans. By then, cleaning up credit reports can take hundreds of hours. Meanwhile, lenders delay extending credit.

"Facebook has become a gold mine and a giveaway for identity thieves," notes Neal O'Farrell at the Identity Theft Council in California. Some users post their full dates of birth, addresses, or phone numbers. Others disclose their places of birth, pet's names, favorite bands, or similar information. That data can help criminals recover someone's password for various accounts. "Identity thieves now have very sophisticated programs that scrape these pages of this information, join the dots, and then clone the identity," says O'Farrell.

Even teens who don't give away information can be vulnerable. Earlier this year, for example, criminals broke into servers for the Sony and Sega corporations, two leading game makers. The security breaches revealed data about millions of people.

Other criminals develop false identities with teens' and young children's Social Security numbers. When one study reviewed a database with information about 42,000 people age 18 and younger, 10 percent of those kids' Social Security numbers had already been used for loans or to open credit accounts. In most of those cases, some sort of identity theft had happened.

"Run a credit check on yourself," suggests O'Farrell. (The government requires the three companies that control individuals' credit information in the United States to provide you with a free report once a year.) If you don't have a credit card or loan yet, finding a report on yourself could signal a problem.

Review your social media page too. Delete anything that could help strangers impersonate or find you. "Unless it's someone I know, I don't freely give out any contact information," says 16-year-old Matt K. in New York. It's just as important that you remove anything that's inappropriate.

"You can't get away with any behavior you want online," stresses McBride. Don't post anything you wouldn't want parents, colleges, or potential employers to see. After all, says McBride, "this is a public forum."

## Take These Steps Now

· Don't strike up online relationships or give your contact info to strangers.
· Never meet someone offline without a parent.
· Disable location tagging on your phone's settings for photos and messages.
· Trim your social media profile to the basics.
· Delete phone info from social media profiles. review your security settings regularly because sites sometimes change their defaults.

- Change passwords every 90 to 120 days. And use different passwords for different devices and sites.
- When you get credit or debit cards, review statements and report inconsistencies right away.
- Use secure web sites for any online purchases.
- Even if you don't have a credit card, check to see whether you have a credit report at www.annual creditreport.com. (Beware of similar-sounding sites selling products.) Correct any problems.
- Above all, use good judgment. Keep your private life private.

## Don't Let Geotagging Target You



Maurizio Gambarini/Newscom

Many mobile devices now include geotagging. The technology embeds specific location information into uploaded images or other material. For instance, if you have photos online showing the location of your home and then you make it known online that you're on vacation and your home is empty, thieves could take advantage. To keep your mobile phone photos from telling where you are, disable the feature in the device's settings.

**Name:** _____ **Date:** _____

**1.** What percentage of reported identity theft cases in the United States involve teen victims?

    A. 50%

    B. 8%

    C. 18%

    D. 10%

**2.** The author tries to persuade readers that protecting your privacy online is important. Which persuasive writing tactics does the author use to make his case?

    A. statistics and facts

    B. personal anecdotes

    C. direct quotations from experts in the field

    D. all of the above

**3.** Which word would the author most likely use to describe the approach someone should take when posting information online?

    A. nervous

    B. bold

    C. cautious

    D. carefree

**4.** Read the following sentence:

"'Neglecting potential identity theft could really come back to bite you,' stresses Toporoff."

In this sentence the word **stresses** means

    A. worries

    B. emphasizes

    C. strains

    D. says

**5.** What would another good title be for this passage?

     A. Going Online? Beware of Thieves and Bullies

     B. Proper Etiquette for Facebook Usage

     C. Cyberbullying: Trends, Problems, and Solutions

     D. The Downsides and Challenges of the Internet

**6.** What is one example of how teens use the internet and social media for cyberbullying?

**7.** What information could an identity thief take from a kid's Facebook page today that would still be useful to the thief twenty years from now?

**8.** The question below is an incomplete sentence. Choose the word that best completes the sentence.

The author suggests you "trim your social media profile to the basics" _____ identity thieves can't steal your identity.

     A. whenever

     B. so

     C. but

     D. because

**9.** Which object(s) would you use to make sure your belongings were not vulnerable to theft?
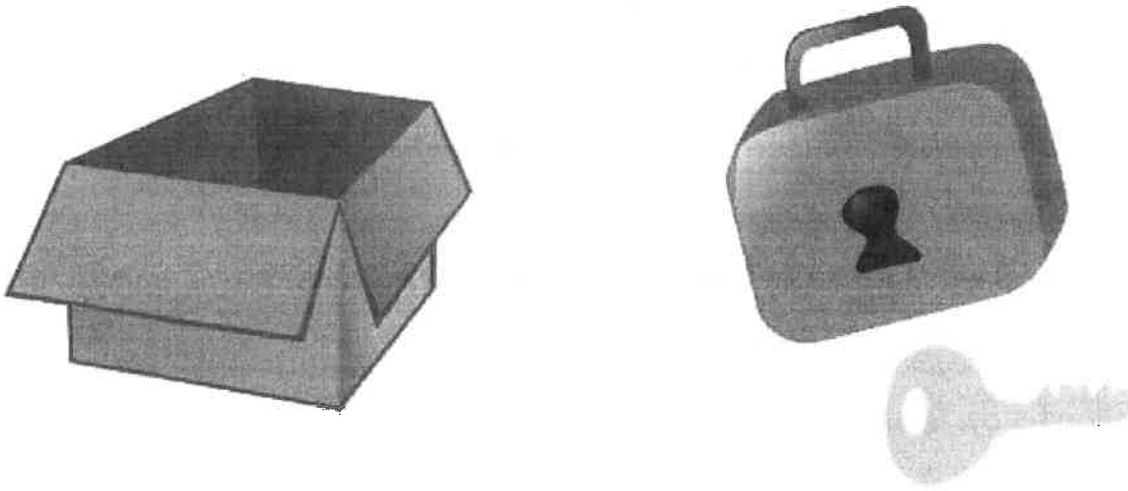
**10.** How can you make yourself less vulnerable to someone stealing your identity?

# Books Through Bars

## by ReadWorks



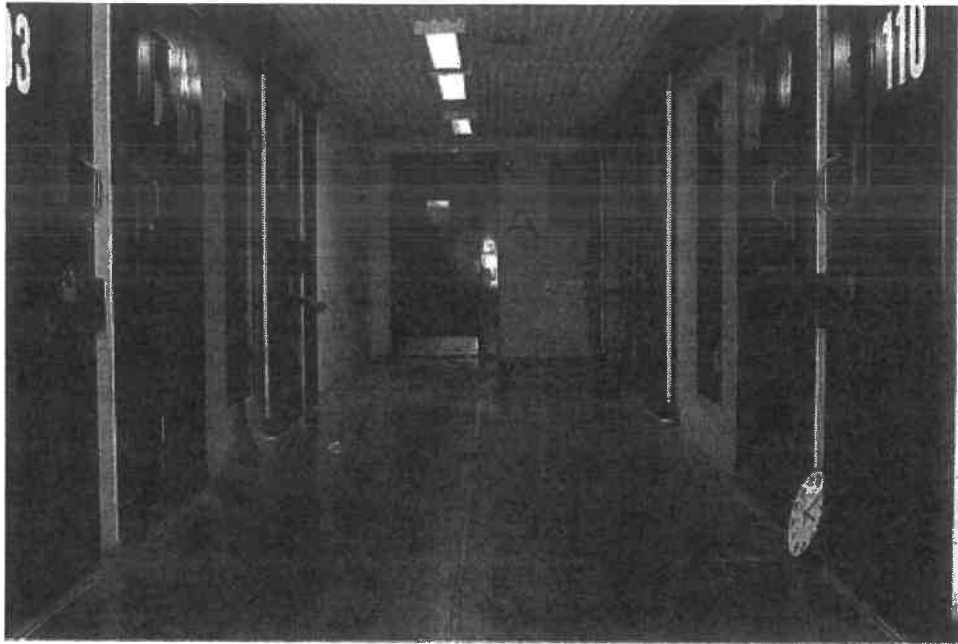When people are sent to prison, they are deprived of many things: their freedom, the company of their friends and family, and many of the daily comforts they have enjoyed for most of their lives. In many cases, they are also deprived of something less obvious, but, for many people, just as dear: books. While some prisons have libraries, many do not. Those that do exist are generally poorly stocked and have many fewer titles than a typical public library. This means that an inmate may go many years with limited access to reading material. For a person who loves books or who wishes to learn about the world, this can be a harsh sentence indeed.

However, there is a group in Brooklyn that aims to help inmates receive some of the literature they want. As of 2013, the group, called Books Through Bars, gathers three times a week in the basement of a bookstore that overlooks the city's East River. The basement is small and dimly lit, but the walls are stacked high with wooden shelves, each packed to the brim with books. The books are arranged like a library, by sections. Novels are against one wall, history against another, and self-help and reference books against a third. All of the books are donated by people who believe that inmates, regardless of the crime they committed, should not be deprived of literature.

In the middle of the room is a table, piled high with letters. The letters come from prisons and jails all over the country. Books Through Bars advertises itself in magazines and pamphlets read by inmates. In the ads, they ask inmates to send them requests for books. So, the inmates write in, asking either for specific titles or books on a particular topic. The volunteers then try to match the requests to books in the Books Through Bars library. Each inmate receives two or three books. When the volunteer has selected the books, he or she wraps them in paper cut from old grocery bags, writes the address of the jail or prison the inmate lives in on the front in black pen, and adds the package to a stack of

packages to be mailed. In one corner of the basement are milk crates filled with brown-paper packages, waiting to be taken to the post office.

Since the library is relatively small-it has only a couple thousand books-matching the inmates' requests can sometimes be difficult. One inmate writes in asking for a book about ancient civilizations, like the Mayans and Aztecs.

"To Whom It May Concern," the postcard says. "I would please like some books on Aztec culture or Mayan books. I am real interested in the history of my great ancestors. There is a book called 'Aztec Thought & Culture' by Juan Portillo Leon. If you could please send me a copy of that paperback book or any related to Aztec culture I would really appreciate this. Thank you, Mario."

Since the library doesn't have any of these books, the volunteers find two related books. One is about ancient Greek civilization, while another is about modern Mexico. Neither quite fulfills the inmate's requests, but the volunteers try to get as close as they can.

Requests for books about ancient civilizations, especially from Latin America, the Middle East, and Africa are common. Books about psychology, self-help, and radical politics also rank high. In general, though, preferences among inmates vary widely. A man in a low-security jail in Miami wants *Lord of the Flies* and *Who Moved My Cheese?* A man in a maximum security prison in California wants books about meteorites and asteroids. A man serving a triple life sentence in Indiana asks for a copy of Tolstoy's *Master and Man*.

In addition to requests for history or science books, other inmates looking towards their release, ask for books about finding jobs or about taking the GED-a test you can take that is the equivalent of a high school diploma. The single most popular request is for a dictionary. While in prison, many inmates are trying to appeal their cases-meaning that they are asking for the verdict to be overturned. When writing their appeals, they need a dictionary to make sure they spell the words correctly. Others just want to improve their vocabulary.

Most of the inmates take a formal, almost meek tone in their letters. "To Whom It May Concern," begins one. "Firstly, I would like to extend my heartfelt gratitude for such a program and I would like to thank you in advance for this service, and it should be known that you are making a profound difference in people's lives who are already in a situation where despair and boredom are constant companions." The author goes on to request a copy of *A Lawyer's Life* by Johnnie Cochran.

Among inmates who ask for fiction, fantasy books are the most popular. A man writing from the secure housing unit of Pelican Bay State Prison in California asks for novels by Terry Goodkind and George R.R. Martin. "I spend 23 hours a day in a cell," he writes, "and to keep the reality of this place in check and to maintain a bit of sanity in this dark place, I submerge myself in a world of books."

The letters are almost always handwritten, usually in pencil, on leafs of notebook paper or on the backs of prison scrap -- commissary lists, visitation forms, memos from the warden. One man from Phoenix sends a postcard. On the front is a color photograph of a group of men wearing black-and-white striped uniforms, like convicts in old prison movies. They are huddled under a giant tent, behind a wire fence. The printed legend reads, "Hello from Sunny Arizona!" On the back, a caption explains that these men are inmates in the world's largest tent jail, run by Sheriff Joe Arpaio.

Prison officials have the right to deny admittance to books they deem dangerous to their institution or

capable of undermining the prisoner's rehabilitation. In such cases, they send the book back with a form letter explaining the reason for the rejection. This reasoning can sometimes seem unsound. An administrator at Northern Correctional Institution in Somers, Connecticut, rejected the primer *Introduction to Psychology* by Ann L. Weber as a threat to security and safety of the prison. A novel by George Orwell called *Burmese Days*, based on the years the famous author spent living in Burma, was rejected by the state of Texas because of similar concerns that it would cause a riot.

Books Through Bars in New York is only one of many groups in dozens of other cities that send books to inmates. While the group in Brooklyn sends books to inmates all over the country, some concentrate mainly on inmates within their state. The volunteers in Books Through Bars hold various views on prisons and inmates. Some believe that the sentencing of inmates is often too harsh, while others believe it is mostly fair. However, what binds the volunteers together is a belief that all of the inmates still have a right to read books.

Name: _____ Date: _____

**1.** Why do people in prison have books sent to them?

    A. People in prison have books sent to them because stores are looking to get rid of their extra books.

    B. People in prison have books sent to them because some prisons have no libraries and others have only poorly stocked ones.

    C. People in prison have books sent to them because judges order them to read in prison.

    D. People in prison have books sent to them because they have to go to school while they are in prison.

**2.** The group Books Through Bars was started to address what problem?

    A. Books Through Bars had too many books and needed to make space.

    B. Books Through Bars needed to find a way to teach inmates the group's political ideas.

    C. Prisoners who wanted to read often had no access to books.

    D. Prisoners were threatening the security of prisons after reading controversial books.

**3.** Books Through Bars gets thousands of letters from people in prison around the country requesting books. Based on this evidence, what conclusion can be drawn?

    A. The wardens make them write letters as part of their sentence.

    B. People in prison are bored and will write to anybody.

    C. The organization can help people get out of jail.

    D. Prisons often don't have enough books for prisoners who want to read.

**4.** Read the following sentence from the text: "I would like to thank you in advance for this service, and it should be known that you are making a profound difference in people's lives who are already in a situation where despair and boredom are constant companions." Based on the evidence in this sentence, how was the letter writer feeling?

    A. grateful

    B. annoyed

    C. confused

    D. surprised

**5.** What is the main idea of this passage?

    A. Judges should order prisoners to read as part of their sentences.

    B. Even people who commit crimes deserve the opportunity to read.

    C. People who commit crimes are too dangerous to read books.

    D. Books Through Bars does not believe in jailing people when they commit crimes.

**6.** Read the following sentences: "When a person is sent to prison, they are deprived of many things: their freedom, the company of their friends and family, and many of the daily comforts they have enjoyed for most of their lives." As used in the passage, what does the word deprived mean?

    A. permitted

    B. given

    C. denied

    D. encouraged

**7.** Choose the answer that best completes the sentence below.

The organization Books Through Bars sends books to prisoners _____ prisons often don't have libraries, or have small libraries.

    A. although

    B. before

    C. yet

    D. because

**8.** Why did a group of people in Brooklyn start the organization Books Through Bars?

**9.** In the passage, the writer describes that some prisoners request novels, others want self-help books, and still others want books about history. Based on this evidence, what conclusion can be made?

**10.** Explain how Books Through Bars has impacted the lives of prisoners by using information from the passage.

# Florence Nightingale

**This article is provided courtesy of History.com**



history.com

Florence Nightingale was born in Florence, Italy, on May 12, 1820. During the Crimean War, she and a team of nurses improved the unsanitary conditions at a British base hospital, reducing the death count by two-thirds. Her writings sparked worldwide health care reform. In 1860 she established St. Thomas' Hospital and the Nightingale Training School for Nurses. She died August 13, 1910, in London.

## EARLY LIFE

Florence Nightingale was born on May 12, 1820, in Florence, Italy. She was the younger of two children. Nightingale's affluent British family belonged to elite social circles. Her mother, Frances Nightingale, hailed from a family of merchants and took pride in socializing with people of prominent social standing. Despite her mother's interest in social climbing, Florence herself was reportedly awkward in social situations. She preferred to avoid being the center of attention whenever possible. Strong-willed, Florence often butted heads with her mother, whom she viewed as overly controlling. Still, like many daughters, she was eager to please her mother. "I think I am got something more good-natured and complying," Florence wrote in her own defense, concerning the mother-daughter relationship.

Florence's father was William Shore Nightingale, a wealthy landowner who had inherited two estates-one at Lea Hurst, Derbyshire, and the other in Hampshire, Embley Park-when Florence was five years old. Florence was raised on the family estate at Lea Hurst, where her father provided her with a classical education, including studies in German, French and Italian.

From a very young age, Florence Nightingale was active in philanthropy, ministering to the ill and poor people in the village neighboring her family's estate. By the time she was 16 years old, it was clear to her that nursing was her calling. She believed it to be her divine purpose.

When Nightingale approached her parents and told them about her ambitions to become a nurse,

they were not pleased. In fact, her parents forbade her to pursue nursing. During the Victorian Era, a young lady of Nightingale's social stature was expected to marry a man of means-not take up a job that was viewed as lowly menial labor by the upper social classes. When Nightingale was 17 years old, she refused a marriage proposal from a "suitable" gentleman, Richard Monckton Milnes. Nightingale explained her reason for turning him down, saying that while he stimulated her intellectually and romantically, her "moral...active nature...requires satisfaction, and that would not find it in this life." Determined to pursue her true calling despite her parents' objections, in 1844, Nightingale enrolled as a nursing student at the Lutheran Hospital of Pastor Fliedner in Kaiserwerth, Germany.

## CAREER

In the early 1850s, Nightingale returned to London, where she took a nursing job in a Middlesex hospital for ailing governesses. Her performance there so impressed her employer that Nightingale was promoted to superintendant within just a year of being hired. The position proved challenging as Nightingale grappled with a cholera outbreak and unsanitary conditions conducive to the rapid spread of the disease. Nightingale made it her mission to improve hygiene practices, significantly lowering the death rate at the hospital in the process. The hard work took a toll on her health. She had just barely recovered when the biggest challenge of her nursing career presented itself.

In October of 1853, the Crimean War broke out. The British Empire was at war against the Russian Empire for control of the Ottoman Empire. Thousands of British soldiers were sent to the Black Sea, where supplies quickly dwindled. By 1854, no fewer than 18,000 soldiers had been admitted into military hospitals.

At the time, there were no female nurses stationed at hospitals in the Crimea. The poor reputation of past female nurses had led the war office to avoid hiring more. But, after the Battle of Alma, England was in an uproar about the neglect of their ill and injured soldiers, who not only lacked sufficient medical attention due to hospitals being horribly understaffed, but also languished in appallingly unsanitary and inhumane conditions.

In late 1854, Nightingale received a letter from Secretary of War Sidney Herbert, asking her to organize a corps of nurses to tend to the sick and fallen soldiers in the Crimea. Nightingale rose to her calling. She quickly assembled a team of 34 nurses from a variety of religious orders, and sailed with them to the Crimea just a few days later.

Although they had been warned of the horrid conditions there, nothing could have prepared Nightingale and her nurses for what they saw when they arrived at Scutari, the British base hospital in Constantinople. The hospital sat on top of a large cesspool, which contaminated the water and the hospital building itself. Patients lay in their own excrement on stretchers strewn throughout the hallways. Rodents and bugs scurried past them. The most basic supplies, such as bandages and soap, grew increasingly scarce as the number of ill and wounded steadily increased. Even water needed to be rationed. More soldiers were dying from infectious diseases like typhoid and cholera than from injuries incurred in battle.

The no-nonsense Nightingale quickly set to work. She procured hundreds of scrub brushes and asked the least infirm patients to scrub the inside of the hospital from floor to ceiling. Nightingale herself spent every waking minute caring for the soldiers. In the evenings she moved through the

dark hallways carrying a lamp while making her rounds, ministering to patient after patient. The soldiers, who were both moved and comforted by her endless supply of compassion, took to calling her "the Lady with the Lamp." Others simply called her "the Angel of the Crimea." Her work reduced the hospital's death rate by two-thirds.

In additional to vastly improving the sanitary conditions of the hospital, Nightingale created a number of patient services that contributed to improving the quality of their hospital stay. She instituted the creation of an "invalid's kitchen" where appealing food for patients with special dietary requirements was cooked. She established a laundry so that patients would have clean linens. She also instituted a classroom and a library, for patients' intellectual stimulation and entertainment. Based on her observations in the Crimea, Nightingale wrote *Notes on Matters Affecting the Health, Efficiency and Hospital Administration of the British Army*, an 830-page report analyzing her experience and proposing reforms for other military hospitals operating under poor conditions. The book would spark a total restructuring of the War Office's administrative department, including the establishment of a Royal Commission for the Health of the Army in 1857.

Nightingale remained at Scutari for a year and a half. She left in the summer of 1856, once the Crimean conflict was resolved, and returned to her childhood home at Lea Hurst. To her surprise she was met with a hero's welcome, which the humble nurse did her best to avoid. The Queen rewarded Nightingale's work by presenting her with an engraved brooch that came to be known as the "Nightingale Jewel" and by granting her a prize of $250,000 from the British government.

Nightingale decided to use the money to further her cause. In 1860, she funded the establishment of St. Thomas' Hospital, and within it, the Nightingale Training School for Nurses. Nightingale became a figure of public admiration. Poems, songs and plays were written and dedicated in the heroine's honor. Young women aspired to be like her. Eager to follow her example, even women from the wealthy upper classes started enrolling at the training school. Thanks to Nightingale, nursing was no longer frowned upon by the upper classes; it had, in fact, come to be viewed as an honorable vocation.

## LATER LIFE

While at Scutari, Nightingale had contracted "Crimean fever" and would never fully recover. By the time she was 38 years old, she was homebound and bedridden, and would be so for the remainder of her life. Fiercely determined, and dedicated as ever to improving health care and alleviating patients' suffering, Nightingale continued her work from her bed.

Residing in Mayfair, she remained an authority and advocate of health care reform, interviewing politicians and welcoming distinguished visitors from her bed. In 1859, she published Notes on Hospitals, which focused on how to properly run civilian hospitals.

Throughout the U.S. Civil War, she was frequently consulted about how to best manage field hospitals. Nightingale also served as an authority on public sanitation issues in India for both the military and civilians, although she had never been to India herself.

In 1908, at the age of 88, she was conferred the merit of honor by King Edward. In May of 1910, she received a congratulatory message from King George on her 90th birthday.

## DEATH AND LEGACY

In [the beginning of] August 1910, Florence Nightingale fell ill, but seemed to recover and was reportedly in good spirits. A week later, on the evening of Friday, August 12, 1910, she developed an array of troubling symptoms. She died unexpectedly at 2 pm the following day, Saturday, August 13, at her home in London.

Characteristically, she had expressed the desire that her funeral be a quiet and modest affair, despite the public's desire to honor Nightingale-who tirelessly devoted her life to preventing disease and ensuring safe and compassionate treatment for the poor and the suffering. Respecting her last wishes, her relatives turned down a national funeral. The "Lady with the Lamp" was laid to rest in a family plot at Westminster Abbey.

The Florence Nightingale Museum, which sits at the site of the original Nightingale Training School for Nurses, houses more than 2,000 artifacts commemorating the life and career of the "Angel of the Crimea." To this day, Florence Nightingale is broadly acknowledged and revered as the pioneer of modern nursing.

Biography courtesty of Bio.com

**Name:** _____ **Date:** _____

**1.** What career did Florence Nightingale pursue, against her parents' wishes?

**2.** Explain how the work of Florence Nightingale saved lives.

Support your answer with evidence from the text.

**3.** What is the main idea of this text?

# Memories - Good and Bad

by ReadWorks



A person's memory can be like a mansion with many, many rooms. Some of the rooms you visit frequently, while others you may not enter for many years. As you age, some of these rooms may change, and you may remember things slightly differently than how they actually happened. In other cases, the rooms may stay the same, but the doors may become locked. Sometimes these rooms can only be unlocked if you find a special key. Some of these rooms you may enjoy visiting; some of them, you may just wish the door stayed shut.

One of the keys that can often unlock a person's memory is a specific sensory input-something you can see, smell, touch, taste, or hear. There is the famous case of the novelist Marcel Proust, who tasted a madeleine-a kind of cookie-and it caused him to suddenly remember an enormous amount of his childhood, memories that had previously been locked away. He went on to write a seven-volume novel called *In Search of Lost Time*, in which he explored these memories and what they meant to him. Proust might not have written these volumes exactly as they are had he not eaten that fateful madeleine.

As Proust demonstrates, while we can consciously summon certain memories-for example, if you try to think of your mother's face, you can almost certainly do it-there are others that visit us involuntarily. This has to do with how the human brain is wired. While much of the brain is still mysterious to scientists, it has been determined that the memory center of the brain, where memories are made and stored, is closely linked to the sensory center, where the brain controls and processes the body's senses. A certain sensory input, such as Proust's cookie, may fire up not just the sensory center, but the memory center, too.

The senses you possess are a way for your brain to monitor what's going on outside. When you receive a particular sensory input, meaning one of your senses is stimulated, that sense will send a signal to your brain telling the information it just received. For example, when Proust tasted his cookie, the sense receptors on his tongue sent a message to his brain telling it how the madeleine tasted. The messages are signals transmitted along nerve cells until they reach the brain. When the brain receives these signals, it processes them and controls the body's reaction to them. Sense receptors react to many different types of inputs, including electromagnetic, mechanical, and

chemical. In Proust's case, his tongue was sensing the chemical makeup of the cookie and its mechanical properties, such as the cookie's hardness and brittleness.

When a nerve signal reaches the brain, the brain can react in a multitude of ways. Often the signal will trigger immediate behaviors or memories that happen automatically, without conscious decisions on your part. For example, let's say you're barefoot, and you step on something sharp. You probably wouldn't have time to think, "Gosh, that really hurts. Should I lift up my foot? Yes, I think I'll do that." Your brain, having registered the pain, reacts by lifting up your foot without you thinking about it. Just as your brain receives signals from its sense receptors through nerve cells, it can send out a command through nerve cells. In this case, your brain sent a signal to your foot telling it to move away from the sharp object.

Not all behaviors your brain tells you to do are the best choices. If you're walking in the woods and you see a bear, your brain, having received the image of the bear through the eye's optic nerve, may start producing chemical compounds called hormones. Amongst other things, hormones affect moods and many behaviors. In this case, the brain will likely produce a hormone called adrenaline, which causes your body to gain energy and alertness. It may also send a signal to your legs that says, "Run!" This is because your brain might have learned from experience that it is a good idea to run from danger. However, in this case, running from a bear is a bad idea. Instead, experts say people should back away from the bear at a relatively slow pace. If you run, the bear is more likely to chase. Hopefully, you will remember this fact, and the next time you see a bear in the woods, your brain will access the memory of what to do.

The way the brain reacts to what it senses often has a lot to do with how it has learned to react in the past. Consider the case of a soldier who goes to war. When a soldier is on a battlefield, he or she very frequently feels unsafe. The soldier may believe that the enemy could strike at any time. As part of his or her training, the soldier has learned to stay alert for any signs of danger and, if one is detected, to react immediately. This is often very important, as any hesitation could result in harm to the soldier or his or her fellow soldiers. Good soldiers often learn to react automatically to certain kinds of danger, much like how people would react automatically when they step on something sharp. For example, if soldiers hear a gunshot, they may react immediately by dropping to the ground to avoid getting hit.

The longer a soldier stays at war, the more his or her brain can become used to reacting in this way. The soldier's senses may become attuned to certain inputs they were never attuned to before the war. For example, his or her nose may begin to be alert for odors that signal danger, and the soldier's ears may become alert to certain sounds. If he or she successfully avoids danger using his or her senses in this way, then the soldier's brain would tell him or her to continue doing this. The brain may also become quicker at releasing hormones, such as adrenaline, if it has been trained to defend the body in this way.

While these reactions may serve the soldier extremely well in a combat zone, they may not be as useful when he or she is at home. In fact, the soldier may have to spend some time readjusting to being in a place where the potential of danger is low. This is because the brain has become used to reacting to certain inputs in a particular way and may need some time to be trained to react in a different way. For example, on the battlefield, the brain might have learned to react to the sound of an airplane by producing adrenaline to prepare the soldier for action. However, if the soldier is away from the battlefield and hears a plane, this injection of adrenaline probably wouldn't help much.

Soldiers, particularly soldiers who have been deeply affected by their time in combat, may, like Proust, be overwhelmed by a flood of memories when they receive certain sensory inputs. While some of these memories may be positive, others may be distressing. The 1998 film *Saving Private Ryan* featured scenes of the historic D-Day landing at Normandy Beach that were recreated in incredible detail. In the battle, many soldiers were killed. When the film was released, there were reports of veterans, particularly World War II veterans, who grew deeply disturbed at seeing the battle scenes. In part, this was because, by recreating the sights and sounds of battle, the film had unlocked many memories the veterans had of the war, some of which were very painful.

Sometimes, triggering memories can be valuable for healing. Every year, many veterans visit the Vietnam Veterans Memorial in Washington, D.C. The memorial is a long wall into which the names of U.S. soldiers who died in the war are etched. Veterans visit the wall for many reasons, but it is nearly always an experience that draws up many emotional memories. Seeing the names and touching the wall can hurt, but it can also remind people of trusted friends whom they lost to the war. Without the wall, these memories might stay locked in a room.

**Name:** _____ **Date:** _____

**1.** What is sensory input?

    A. something that a person can see, smell, touch, taste, or hear

    B. an electric shock

    C. a memory

    D. a message from the brain that produces hormones

**2.** The passage describes ways that sensory input can help people access or "unlock" forgotten memories.

Which of the following describes evidence that sensory input can unlock a memory?

    A. Your brain produces a hormone that tells you to run when you see a bear.

    B. Marcel Proust ate a madeleine and recalled a large portion of his childhood.

    C. You automatically move your foot away from a sharp object after stepping on that object.

    D. You can remember what your mother's face looks like.

**3.** Behaving a certain way for an extended period of time can affect the way that our brains react to sensory input in the future. What evidence from the text supports this conclusion?

    A. writing a novel and remembering things from a long time ago

    B. moving away from something that causes you pain automatically

    C. feeling scared when you see something dangerous

    D. a former soldier hearing a plane overhead and automatically producing adrenaline

**4.** Why are sense reactors important?

    A. They tell your body to run away from bears.

    B. They help make your memory stronger.

    C. They are the way that your brain processes what's going on in the world around you.

    D. They let your brain know which parts of your environment to ignore.

**5.** What is this passage mostly about?

    A. the life of Marcel Proust

    B. the way that our brains respond to sensory input

    C. how soldiers acclimate to life at home after returning from war

    D. how to unlock the hidden memories in your brain

**6.** The author uses a metaphor to compare human memory to something else. What does the author compare human memory to?

    A. a mansion with many rooms

    B. a maze

    C. a locked door

    D. Marcel Proust's *In Search of Lost Time*

**7.** Choose the answer that best completes the sentence below.

Soldiers develop reactions that serve them extremely well in combat, _____, they may not be as useful when the soldiers return home.

    A. instead

    B. however

    C. therefore

    D. consequently

**8.** Sense receptors respond to a number of different types of inputs.

Use evidence from the text to support this statement.

**9.** Describe how soldiers may need to adjust their behavior when they are no longer in a combat zone.

**10.** Explain how sensory input impacts the ability to remember past experiences by using information from the text.

# Through the Nose
by Frances Killea
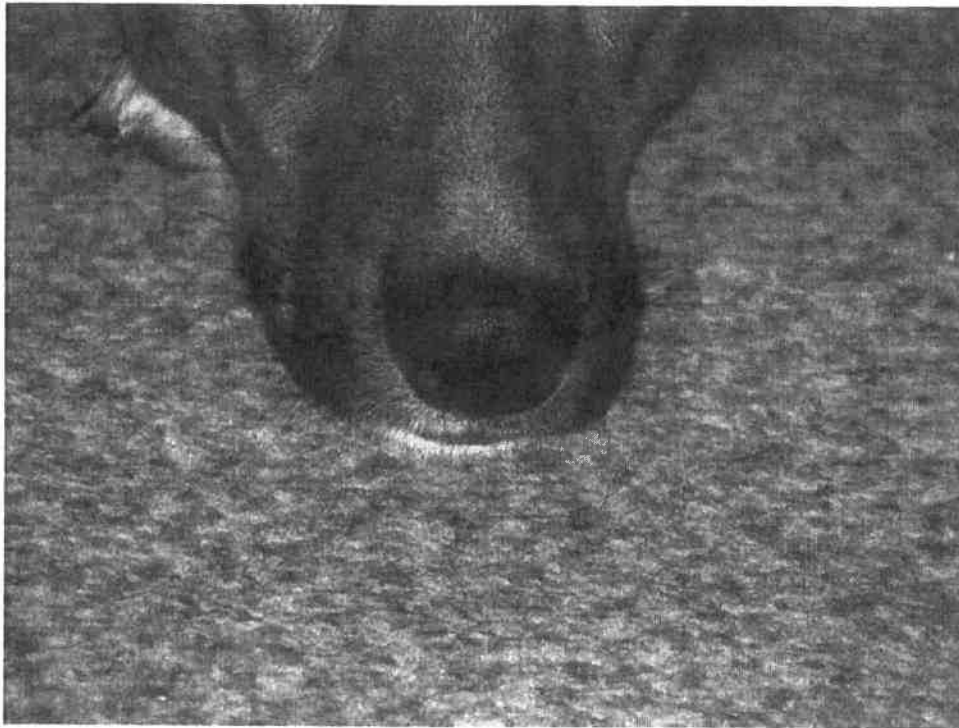


Every day, our senses tell us about the world. We taste, touch, smell, hear, and see things, and what we experience helps us learn. As we store more and more information in our memory, we are able to decide how to act in different situations based on the knowledge we have gained through our senses. For example, if you've ever touched a hot stove, your sense of touch quickly told you that *OUCH!* the stove is too hot. We learn that the high heat can hurt us, and we know the next time we walk into the kitchen not to touch the stove when it's on!

Animals learn the same way we do: by using their senses. A dog's eyes and ears and nose work the same way that ours do, by detecting sights, sounds, and scents. Dogs' noses, however, are super -powered compared to ours. Let's get gross for a minute, and think about the inside of our noses. Membranes, thin, film-like layers that line the inside of the nasal cavity, help us smell because they are packed with tiny scent-tracking hotspots called olfactory receptors. Humans have about 5 million of these receptors, while dogs have 220 million. If you were to lay a dog's nasal membranes out flat, they would be able to cover its body!

So what does this mean? It means that dogs can smell a lot more things a lot more strongly than we can. Their powerful sense of smell can pick up scents that we don't even know exist, and a large portion of a dog's brain is dedicated to interpreting what those scents mean. Dogs constantly sniff: the air, the ground, food, furniture, other dogs, and humans, and it's all because they are trying to make sense of the world around them.

What do dogs do with all of the information they collect with their noses? The scents that dogs pick up help them understand their surroundings. Dogs store what they learn, making memories that guide their future actions. When trained to discern tiny differences in scents, dogs can do remarkable

things. For instance, dogs can learn to sniff out drugs and explosives (have you ever seen a dog with a security guard at a big office building or an airport?). They can also, with training, pick out the one stick thrown for them from a heap of many, based on the scent of their owner. With that kind of olfactory ("olfactory" means that something is related to the nose and scent) talent, it's no wonder dogs are often used in searches for missing hikers or people lost in avalanches!

Also, dogs recognize one another by scent; a mother dog knows which puppies are hers by how they smell, for example. Plus, dogs can determine pretty quickly what another dog is like, and whether or not they're going to get along, by detecting specific scents on other animals that indicate age, gender, and even mood.

Dogs know humans by scent, too! You don't notice it, but you have a unique scent, and your dog - and other people's dogs - can tell the difference between you and someone else in large part because of your specific smell. Pets come to associate the scent of their owners with home and safety, as human and dog become more familiar with one another. Some scientists even think that dogs can tell how their owners are feeling based on smell, and one study in England tested the ability of dogs to detect cancer in human patients.

A simple way to think about how dogs can do these incredible things is to look at the process like a chain. A dog sniffs, breathing in a lot of different scents, which are then interpreted by its brain as information about the environment. The dog learns about its surroundings that way, and with training - repeated exposure to a certain scent in order to make it easily recognizable - stores what it has learned in its memory, and is able, in the future, to act on what it knows. That's how dogs help rescue teams find missing people and help policemen locate dangerous substances in searches, and that's how your dog knows it's you when you come home after school.

**Name:** _____ **Date:** _____

**1.** What animal's sense of smell is discussed in the passage?

    A. a cat's sense of smell

    B. a dog's sense of smell

    C. a chicken's sense of smell

    D. a pig's sense of smell

**2.** What does this passage describe?

    A. the different parts of a dog's brain and the role each part plays in interpreting smells

    B. the experience of two people who get lost while hiking and the dog that helps find them

    C. how dogs are used by doctors around the world to detect cancer in human patients

    D. dogs' sense of smell and what dogs do with the information collected by their noses

**3.** A dog's sense of smell is much more powerful than a human's sense of smell.

What evidence from the passage supports this statement?

    A. A dog has 220 million scent-tracking hotspots in its nose, while a human has about 5 million.

    B. A dog's eyes, ears, and nose work the same way that a human's eyes, ears, and nose work.

    C. Touching a hot stove teaches people not to do so again because the stove's high heat can hurt them.

    D. Every person has a specific scent that is different from the scents of other people.

**4.** What is one reason that dogs are able to help find drugs, explosives, and dangerous substances?

    A. Some dogs are able to recognize people and other dogs by scent.

    B. Some drugs, explosives, and dangerous substances have a smell.

    C. Drugs, explosives, and dangerous substances are often carried by missing hikers.

    D. Dogs are able to tell how their owners are feeling based on smell.

**5.** What is this passage mainly about?

    A. why it is important for security guards at big office buildings and airports to have dogs with them

    B. what olfactory receptors are, how they work, and the ways they can be used by people to learn about their surroundings

    C. the amount of time it takes dogs to associate the scent of their owners with home and safety

    D. the information dogs pick up through smells and what they can do with that information

**6.** Read the following sentence: "A dog's eyes and ears and nose work the same way that ours do, by detecting sights, sounds, and **scents**."

What does the word **scents** mean?

    A. problems

    B. dreams

    C. feelings

    D. smells

**7.** Choose the answer that best completes the sentence below.

Dogs learn about their surroundings by using their senses, _____ the sense of smell.

    A. after

    B. although

    C. especially

    D. before

**8.** According to the passage, how can a dog tell the difference between you and someone else?

**9.** Describe the process a dog goes through to store information about its surroundings in its memory.

**10.** Suppose that a dog owner went for a walk in the woods behind his house and then disappeared. Would his dog be able to help find him? Explain why or why not, using evidence from the passage.