MCMS
6th Grade
NTI Packet
Day 11

6th Grade Math
Day 11

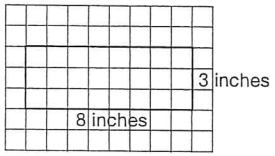
Name _____

Reteaching
17-2

Area of Rectangles and Irregular Figures

Find the area of a rectangle that is 8 inches long and 3 inches wide.

Use Counting
Draw the rectangle on graph paper. Let each square represent 1 square inch.



Count the squares inside the rectangle. There are 24 squares, so the area is 24 sq in.

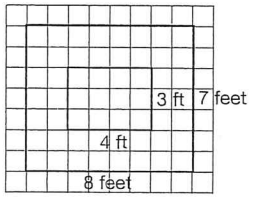
Use a Formula
Use the formula for area.To find area, multiply length times width.

$A = \ell \times w$ ℓ = length, w = width
$A = 8 \times 3$ $\ell = 8$, $w = 3$
$A = 24$

The area of the rectangle is 24 sq in.

A path around a garden measures 8 ft by 7 ft. The garden measures 4 ft by 3 ft. What is the area of the path?

Use Counting
Draw the figure on graph paper. Let each square represent 1 square foot.



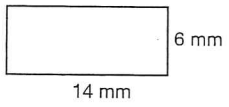
Count the squares in the path only. There are 44 squares, so the area is 44 sq ft.

Use a Formula
Find the total area of the path and then subtract the area of the garden.

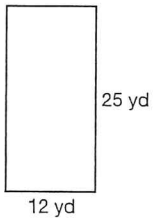
Path:	Display:
$A = \ell \times w$	$A = \ell \times w$
$A = 8 \times 7$	$A = 4 \times 3$
$A = 56$ sq ft	$A = 12$ sq ft

$56 - 12 = 44$, so the area is 44 sq ft.

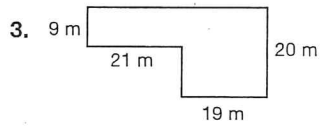
Find the area of each figure.

1. 

_____

2. 

_____

3. 

_____

4. Suppose a rectangular path around a rectangular garden measures 4 meters by 7 meters. The garden measures 3 meters by 6 meters. What is the area of the path? _____

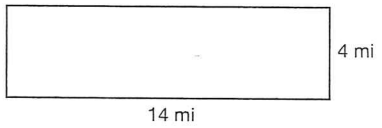
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Name _____

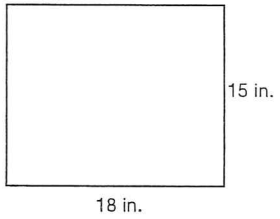
Practice
17-2

Area of Rectangles and Irregular Figures

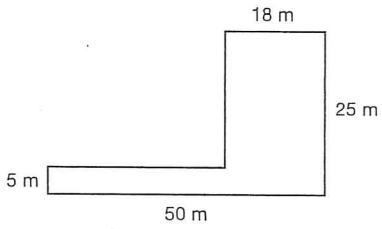
Find the area of each figure.

1. 

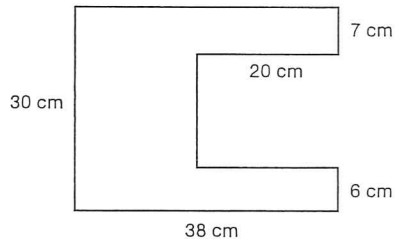
_____

2. 

_____

3. 

_____

4. 

_____

For **5** and **6**, draw and label the figures described using graph paper. Then calculate the area of each figure.

5. A rectangle that is 13 units by 9 units

_____

6. Carlos is laminating a kitchen counter that has dimensions of 12 feet by 3 feet. The counter has a hole with dimensions of 3 feet by 2 feet cut in it for a sink. What is the area of the kitchen counter that Carlos will laminate?

_____

7. What is the area of a square that is 30 centimeters on one side?

A 60 cm^2 **B** 120 cm^2 **C** 300 cm^2 **D** 900 cm^2

8. **Writing to Explain** If you know the perimeter of a rectangle but not its length or width, can you calculate its area? Explain.

_____

_____

Basic Skills with Decimals Name_____ ID:11 Day

DO NOT USE A CALCULATOR

Date_____ Period____

Find each sum.

1) 302.8 + 71.7

A) 365.2 B) 343.842
C) 374.5 D) 351.5

2) 415.7 + 152.7

A) 568.4 B) 127.7
C) 487.2 D) 616.9

3) 207.5 + 227.1

A) 436.09 B) 870.9
C) 514.4 D) 434.6

4) 129 + 97.4

A) 669.6 B) 226.4
C) 46.7 D) 522.9

Find each difference.

5) 315.9 – 44.3

A) 758.2 B) 377.4
C) 271.6 D) 26

6) 357 – 251.3

A) 126.984 B) 105.7
C) 117.6 D) 303

7) 452.8 – 259.7

A) 193.1 B) 479.64
C) 9.9 D) 155.3

8) 338 – 59.9

A) 75.4 B) 762.4
C) 655.6 D) 278.1

Find each quotient.

9) 3.7 ÷ 0.1

A) 0.37 B) 3.8
C) 1.1 D) 37

10) 1.5 ÷ 3

A) 0.5 B) 4.5
C) 1.381 D) 2

11) 2.7 ÷ 0.9

A) 2.8 B) 2.43
C) 1.8 D) 3

12) 0.8 ÷ 0.4

A) 0.5 B) 2
C) 0.4 D) 0.32

Find each product.

13) 5.5 × 9.6

A) 1.38 B) 15.1
C) 52.8 D) 60.9

14) 6.1 × 4.4

A) 21.04 B) 10.5
C) 40.896 D) 26.84

15) 6.6 × 8.7

A) 51.42 B) 60.32
C) 15.3 D) 57.42

16) 7.1 × 9.46

A) 71.366 B) 75.266
C) 64.466 D) 67.166

Earth Science - The Weather

by ReadWorks



Weather is made up of several different components. In order to understand weather, you must understand air temperature, clouds, wind, and precipitation (rain and snow). Weather is never exactly the same everywhere. It is always changing, and depending on what climate you live in, weather can change drastically from mile to mile.

In America we use the Fahrenheit scale to measure air temperature. When the temperature rises on the Fahrenheit scale, it shows us that the temperature is hotter. When the temperature goes down, it means that it is getting cooler.

Low-pressure systems are associated with clouds and precipitation, while high-pressure systems are normally associated with dry weather and mostly clear skies. Clouds are made up of millions of tiny ice crystals. Clouds high up in the sky are very cold, and look very fluffy. Lower clouds in warmer air look sharper. From clouds, we get rain and snow. Humidity is the measure of water vapor in the air. On a beautiful day, there is low humidity. On a foggy day there is high humidity. On a rainy day there is 100% humidity.

Name: _____ Date: _____

1. In America, what scale do we use to measure air temperature?

A. Fahrenheit

B. Celsius

C. Watts

D. liters

2. How is the passage organized?

A. There are descriptions how each weather component works, then he or she introduces all of the weather components

B. Some of the weather components are first listed and then only a few of these components are explained

C. All the weather components are listed and then shown how each one works all at the same time

D. Only the weather and how it impacts the land is described

3. On a very foggy day, humidity would probably reach around

A. 20%

B. 30%

C. 10%

D. 80%

4. Read the following sentence: "Low-pressure systems are associated with clouds and precipitation, while high-pressure systems are normally associated with dry weather and mostly clear skies."

The word **associated** most nearly means

A. linked with

B. free from

C. broken with

D. unlinked

5. This passage is mainly about

A. why places are sunny all the time

B. weather and its different components

C. why places can change weather quickly

D. how Fahrenheit and Celsius work

6. Use details from the text to describe clouds.

7. If there was a high pressure system in your area and a bunch of clouds were blown in from a different direction, how would the pressure system in your area change?

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

Humidity is the measure of water vapor in the air, _____ on a rainy day there is 100% humidity.

A. for

B. so

C. yet

D. but

6th English
NTI Day#11

Directions
Read this story. Then answer questions 8 through 14.

Drawing Horses

by Cerelle Woods

I'd give anything to draw horses the way Euphemia Tucker does. She draws them in the margins of spelling tests and on the back of her math homework. They're always running wild and free, their manes swirling over the paper like clouds across the sky.

Euphemia's horses look so real you can almost feel their breath on your face.



Luke Anderson, who sits next to me, says he can't decide whether my horses look more like Great Danes or kitchen tables. He also calls me Messy. I prefer Marisa, which is my real name, to Missy, which is what everyone—except Luke—calls me. If I could draw like Euphemia, I'd sign all my pictures Marisa. Nobody messes with Euphemia's name, not even Luke Anderson.

Today I sharpened my pencil and took a clean sheet of paper out of my desk. Then I closed my eyes and pictured one of Euphemia's perfect horses rearing up and pawing the air with its sharp hooves. I could see it so clearly I was sure I'd be able to draw it this time.

I started with what I do best: a big, billowing mane. Next I roughed in most of the body and drew a long tail streaming out behind. It really wasn't turning out half bad until I got to the front-legs-pawing-the-air part, which looked more like two macaroni noodles with tiny marshmallows for hooves.

I tried again, but the hooves still didn't seem right, and rather than doing them over and over, I erased them and went on to the head. That was when I really ran into trouble.

First I drew some great donkey ears, followed by sheep ears, pig ears, kangaroo ears . . . everything except horse ears. I erased again and again until I had rubbed a hole in the paper. That was when Luke Anderson poked his nose over my shoulder.

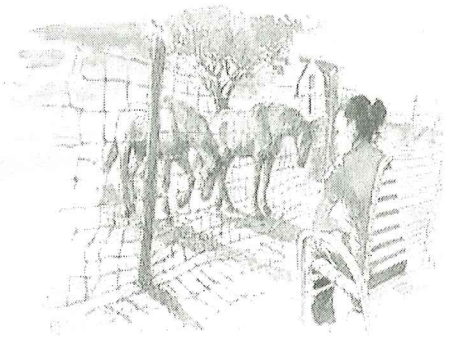
I scratched a big X through my earless, macaroni-legged horse, wadded it up into a little ball, and stuffed it under the lid of my desk.

I was still upset when I got off the school bus this afternoon. I walked past the neighbors' horses standing in the field next to our house. They've been in that field for as long as I can remember. Their stringy manes never float into the sky. Their ragged old tails hang straight down to the ground, and I've never seen them run.

GO ON

I brooded about it all through dinner. After I'd helped clear the dishes, I sat down with a stack of typing paper and a freshly sharpened pencil. Without Luke Anderson there to pester me, I hoped I'd have better luck. I practiced a few horses' heads, trying to get the ears right. Nothing worked.

I tossed all the sketches into the trash and walked outside. The sun had just sunk below the horizon, feathering the whole sky with pink and orange wisps. Everything looked special in that light, even the scraggly horses next door.



I dragged a lawn chair over to the fence and sat down to take a better look at them. They'd never be free spirits like Euphemia's horses, but they did seem patient and strong. I noticed the curves of their muscles, the shadows on their faces, the shine along their backs. Their colors reminded me of dessert—rich chocolate, deep cinnamon, creamy caramel.

I was just sitting there, feeling kind of dazzled by the unexpected beauty of it all, when I remembered the big box of pastels my grandmother had sent.

An idea began to take shape in my mind, and just then the cinnamon horse turned its head toward me and nodded three times. It was like a sign.

I hurried into the house, grabbed the pastels and some paper, and raced for the door.

I choose a deep brown, pulling it across my paper in the shape of the chocolate horse. It comes out right the first time, even the legs and ears! Drawing horses is easier when they're right in front of you, and I'll say this for the ones next door—they hold their poses.

The sky is turning out just as I'd hoped, too; all the pinks and reds blending together like a strawberry parfait, and I love the way the caramel horse's mane is blowing, just barely, in the wind.

It doesn't look exactly like one of Euphemia's horses, of course. But I already know that when this drawing is finished, I'll be signing it Marisa.

8 In line 3, what does the simile "like clouds across the sky" help the reader understand about the horses in Euphemia's sketches?

A They are drawn sloppily.

B They look like they are in motion.

C They are getting tangled up with each other.

D They look like they are trotting through fog.

9 How do lines 14 through 16 contribute to the development of the plot?

A They establish Marisa's problem.

B They emphasize Marisa's hopefulness.

C They contrast Marisa's artistic abilities with Euphemia's.

D They illustrate Marisa's determination to not let Luke bother her.

10 Which phrase **best** conveys the tone in lines 1 through 30?

A "They're always running wild and free. . ." (lines 2 and 3)

B "He also calls me Messy." (lines 8 and 9)

C "Next I roughed in most of the body. . ." (lines 17 and 18)

D "I scratched a big X through my earless, macaroni-legged horse, . . ." (line 26)

11 Read this sentence from line 32.

I brooded about it all through dinner.

What effect does the word "brooded" have in the story?

A It shows Marisa's anxiety about her abilities.

B It reveals Marisa's motives for drawing.

C It emphasizes how Marisa is growing as a character.

D It indicates Marisa has a major decision to make.

12 How do lines 36 through 38 help convey the theme of the story?

A They show that some situations take time to change.

B They prove that practice can help natural talents to develop.

C They suggest that inspiration may come in unexpected ways.

D They demonstrate that new ideas will eventually be accepted.

13 Which sentence **best** explains why Marisa's final horse drawing was different than her first tries?

A "Everything looked special in that light, even the scraggly horses next door." (lines 37 and 38)

B "I noticed the curves of their muscles, the shadows on their faces, the shine along their backs." (lines 42 through 44)

C "An idea began to take shape in my mind, and just then the cinnamon horse turned its head toward me and nodded three times." (lines 49 and 50)

D "I choose a deep brown, pulling it across my paper in the shape of the chocolate horse." (line 52)

14 How does Marisa change while watching her neighbors' horses?

A She realizes that Euphemia's horses do not look realistic, so she decides to try to draw better pictures than her friend.

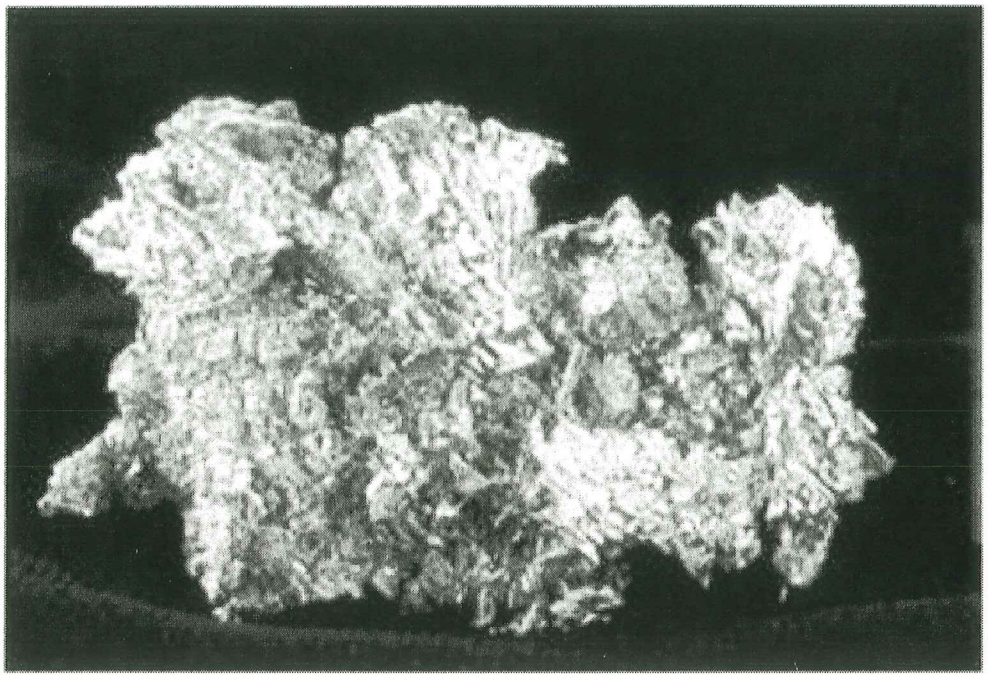
B She decides to try a different way of drawing and is proud of her work.

C She realizes she can never be an artist like Euphemia but wants to draw like her anyway.

D She finally learns that drawing horses is easier with proper lighting and art supplies.

The Allure of Gold

by ReadWorks



The Egyptians used it to create funeral masks for their pharaohs. The Incas called it the "sweat of the sun." It is used to make medals for the best athletes in the world. It symbolizes wealth and riches. Over the centuries, gold has become important to humans. The heavy metal has cultural and economic meaning for human civilizations around the world. But this wasn't always the case.

Gold was used to make jewelry thousands of years ago. Some of the oldest pieces found date before 4000 B.C. Over the centuries, other cultures developed the ability to mine gold and began to use it to buy goods and services. The Ancient Greeks used gold as a form of currency and mined the metal throughout the Middle East and the Mediterranean. The Roman Empire also learned how to mine gold. Ancient Romans built waterwheels and diverted streams of water to extract gold from rivers.

The lure of gold has had a major impact on the course of history in the United States as well. When gold was found in California in 1848, it triggered a movement called the gold rush. Thousands of settlers moved west, hoping to find gold and become rich. In total, 300,000 people came from all over the world to California during the gold rush. Before the gold rush, San Francisco was a tiny town of only 200 people. By the end of the gold rush in 1870, San Francisco's population had grown to 150,000 people. Thousands of Native Americans were displaced by the new settlers and the natural environment was dramatically transformed.

So what exactly is gold? What are the properties of this metal that has become so important to human society? Gold is a pure chemical element and its symbol on the Periodic Table is *Au*. The symbol, Au, comes from the Latin word for gold, *aurum*. Gold's atomic number is 79, one of the higher naturally occurring atomic number elements. Even for a metal, gold is quite heavy-over 19 times

heavier than water.

Scientists believe that gold was formed by explosions in space. Dusts that contained metals, including gold, were spread by these explosions throughout the galaxies until they condensed into the solar system and planets where we now live. Because the core of the earth was hot and molten when the planet formed, almost all of the gold sank into the earth's core where we cannot reach it. The gold that humans now find on the surface of the earth came from asteroids that hit the earth billions of years ago.

Gold originally acquired importance to humans because of its appearance. In societies from India to Egypt, gold was used to make decorative objects and jewelry. Unlike silver and some other metals, gold does not lose its brilliance or tarnish when it is exposed to water or air. Gold is also exceptionally resistant to the effects of acid and does not corrode easily. Like other metals, gold is highly conductive of electricity. It can be used in electronics, but because it is so expensive it is rarely used. There are only two metals that are more conductive than gold, based on volume: copper and silver.

Gold is present in the planet's oceans, with significant amounts of the metal in and below the water. It is estimated that in all of the earth's seawater there are approximately 15,000 tons of gold. Although many people have tried to extract gold from the oceans, no one has been successful at recovering gold from seawater.

When it is unmixed with other metals, gold is actually quite soft and malleable. This flexibility makes it easy to use gold in many different ways. A single gram of gold can be hammered into a thin sheet that is one square meter. You can even hammer gold leaf until it is so thin, it becomes transparent.

Because gold is so soft, it is often combined with other metals to make an alloy. The rose gold or white gold that is often found in contemporary jewelry is made by combining gold with other metals including copper, silver, nickel and palladium. Pure gold is measured by weight. Scientists use another term, *karat*, to express how much gold is present when it is combined with another metal. In these circumstances, pure gold is described as 24 karat gold. When gold is mixed with other metals, it becomes 22 karat, 18 karat, 14 karat or 10 karat gold.

Historically, gold was especially easy to melt and work with because it was often found in pure nuggets. Most other metals are only found in ore-bodies-mixes of rock and metals that are more difficult to separate. Gold is also found in ore, distributed in small particles or bands inside rock. When the rock breaks down naturally, for example, due to a river or stream passing over it, the gold particles are released into the debris. In the case of the river, this means that tiny gold nuggets can be found in the sand on the riverbank. There are other nuggets and rocks that look similar to gold, most notably pyrite (also known as "Fool's Gold"). Pyrite is an iron sulfide that looks like gold and may have very small amounts of gold in it. In addition to iron, gold is often found in metal solid solutions with silver or with quartz. A total of 174,100 tons of gold have been mined throughout human history and over three-fourths of this gold has been extracted since 1910.

Most of the gold currently sold in the world comes from mining. South Africa has one of the largest gold mining economies in the world. While this has brought wealth to the country, it has also caused some problems with pollution; mine waste releases harmful acid into the environment. As mines near the surface run out of gold, miners burrow deeper under the ground. Some gold mines are as deep as three miles under the earth's surface. Once a mine is dug, the gold must be extracted from the ground, separated from the ore, and then refined into pure gold. Only at that point can it be poured

into bars for investment or made into fine jewelry. It may seem like a lot of work, but a single ounce of gold is worth as much as $1,300. It doesn't look like gold mining will stop any time soon.

Gold has impacted, and will continue to impact, human society and history. Whether used as jewelry or currency, gold carries value. Its properties-weight, durability, malleability, rarity, and beauty-combine to make it a natural symbol of wealth and prosperity. People want gold. Its pursuit has driven economic and technological development across the ages, all over the globe, from South Africa to California and beyond. But not without cost: the pursuit of gold has negative impacts, both environmental and social. Nevertheless, this precious mineral formed in space continues to inspire us. We, like the ancient peoples who first discovered it, are touched by the allure of gold.

Name: _____ Date: _____

1. According to the passage, gold was used to make which item thousands of years ago?

A. baskets

B. seashells

C. jewelry

D. clothing

2. The cause of the gold rush was the discovery of gold in California in 1848. What was an effect of the gold rush?

A. Thousands of settlers moved west, leading to the growth of cities like San Francisco.

B. Thousands of Native Americans started business based on gold and became rich.

C. Some farmers started trading their bushels of corn for baskets of tomatoes as part of a barter system.

D. Societies in China, South Asia and parts of Africa started using shells as a form of money.

3. Read the following sentences: "Gold was used to make jewelry thousands of years ago. Some of the oldest pieces found date before 4000 B.C. Over the centuries, other cultures developed the ability to mine gold and began to use it to buy goods and services. The Ancient Greeks used gold as a form of currency and mined the metal throughout the Middle East and the Mediterranean."

Based on this information, what can be concluded about the use of gold?

A. Gold has been used for only one purpose throughout history.

B. Gold has had different uses throughout history.

C. Gold was primarily used only by ancient civilizations.

D. Gold was used more in ancient times than it has been used in modern times.

4. Based on the passage, what can be concluded about the earth's supply of gold?

A. Humans have used up nearly all of the earth's supply of gold.

B. Humans have used up half of the earth's supply of gold.

C. The earth's supply of gold increases gradually from year to year.

D. Humans have used up little of the earth's supply of gold.

5. What is this passage mainly about?

A. jewelry making in ancient civilizations

B. the properties and use of gold

C. the use of gold throughout different time periods

D. the development of currency systems

6. Read the following sentences from the passage: "A single gram of gold can be hammered into a thin sheet that is one square meter. You can even hammer gold leaf until it is so thin, it becomes **transparent**."

As used in this passage, what does "**transparent**" most nearly mean?

A. see-through

B. cloudy

C. shiny

D. complex

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

_____ gold is very valuable, gold mining will not stop any time soon despite the fact that it is a lot of work and can lead to pollution.

A. However

B. Although

C. Because

D. Consequently

8. What are some of the uses for gold described in the passage?

9. According to the passage, why did gold originally acquire importance to humans?

10. Explain why gold mining will not stop any time soon. Use evidence from the passage to support your answer.