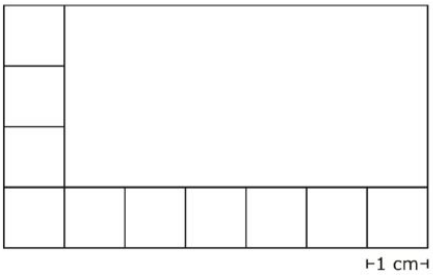
April 21-24 3rd Grade Lessons

Tuesday, April 21

Area

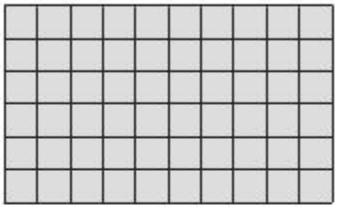
The measure of a number of unit squares needed to cover a surface.



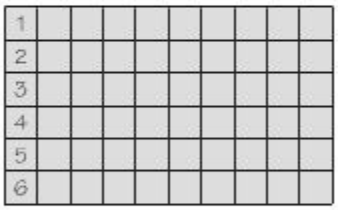
4x7=28 sq. cm

Use Area Models

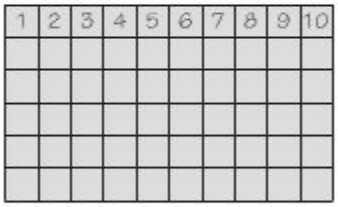
Use multiplication to find the area of the shape.
Each unit square is 1 square meter.



Step 1 Count the number of rows.
There are 6 rows.



Step 2 Count the number of unit squares in each row. There are 10 unit squares.



Step 3 Multiply the number of rows by the number in each row to find the area.

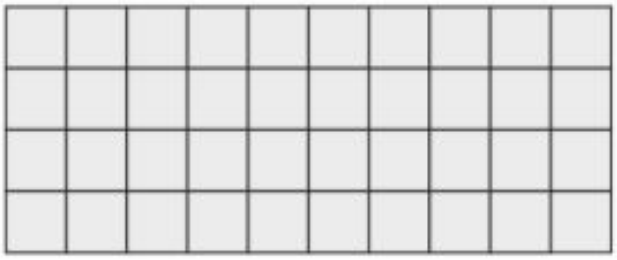
number of rows × number in each row = area

6 × 10 = 60

So, the area of the shape is 60 square meters.

Try This!

Find the area of the figure.
Each unit square is 1 square foot.



Think: There are 4 rows of 10 unit squares.

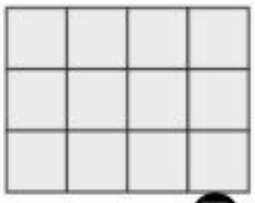
_____ × _____ = _____

So, the area is _____ square feet.

Share and Show

MATH BOARD

1. Look at the figure.



_____ rows of _____ = ■

Add. _____ + _____ + _____ = _____

Multiply. _____ × _____ = _____

What is the area of the figure?

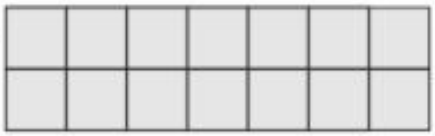
_____ square units

Math Talk MATHEMATICAL PRACTICES 6

Compare Which method do you prefer using?

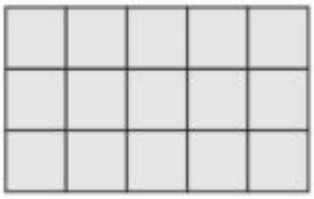
Find the area of the figure.
Each unit square is 1 square foot.

2.



_____

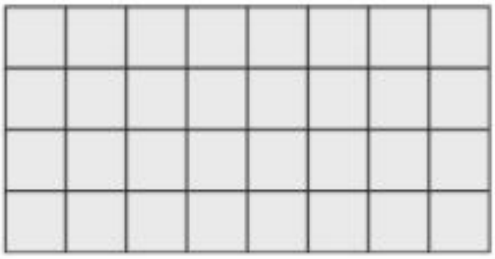
3.



_____

Find the area of the figure.
Each unit square is 1 square meter.

4.



_____

5.

_____

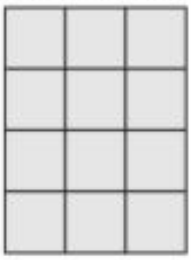
Tuesday, April 21

Name _____

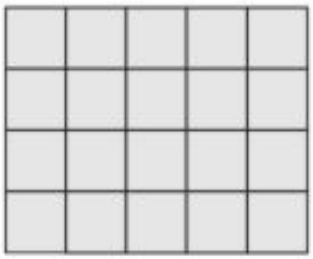
On Your Own

Find the area of the figure.
Each unit square is 1 square foot.

6.

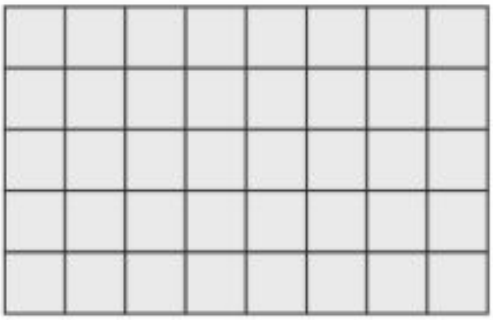


7.



Find the area of the figure.
Each unit square is 1 square meter.

8.



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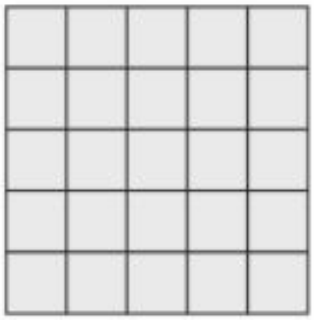


10. MATHEMATICAL PRACTICE 4 **Use Diagrams** Draw and shade three rectangles with an area of 24 square units. Then write an addition or multiplication equation for each.

Tuesday, April 21

Name _____

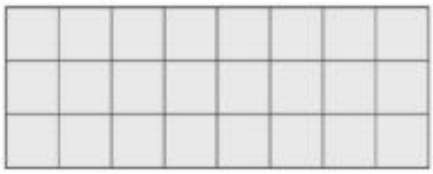
Use Area Models

Common Core

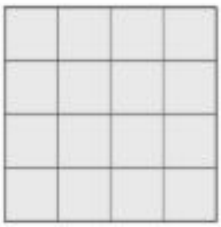
COMMON CORE STANDARDS—
3.MD.C.7, 3.MD.C.7a *Geometric measurement: understand concepts of area and relate area to multiplication and to addition.*

Find the area of each shape. Each unit square is 1 square foot.

1.



2.



There are 3 rows of 8 unit squares.
$3 \times 8 = 24$

24 square feet

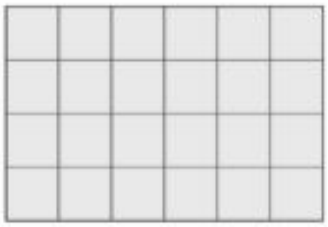
_____

Find the area of each shape.
Each unit square is 1 square meter.

3.

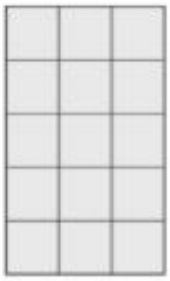
_____

4.



_____

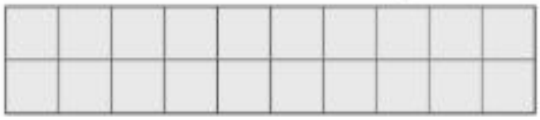
5.



_____

Problem Solving Real World

6. Landon made a rug for the hallway. Each unit square is 1 square foot. What is the area of the rug?



_____

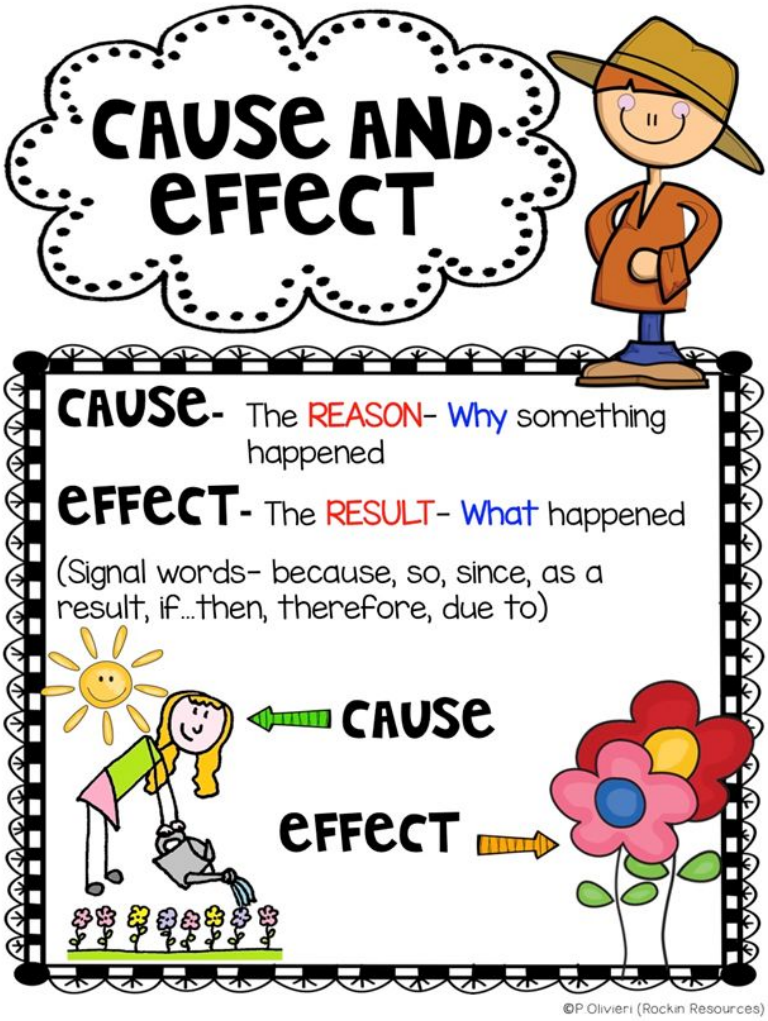
7. Eva makes a border at the top of a picture frame. Each unit square is 1 square inch. What is the area of the border?

_____

8. WRITE *Math* Describe each of the three methods you can use to find the area of a rectangle.

_____

Tuesday, April 21



Cause and Effect

Cause is why something happens. Effect is what happens because of the cause.

Example:

Cause	Effect
A character in the story chose not to do any of their homework and didn't study for the test.	That character did not get the grade they had hoped to earn on their test.

1. HOMEWORK

Mallory had lots of homework and studying to do. First, she spent 20 minutes practicing her spelling words. She wrote each one three times and then had her mom quiz her. Since she got one wrong on the quiz, she spent extra time practicing that word. After spelling, Mallory completed her math homework. She didn't understand the last problem, so she had to ask her dad for help. He was happy to explain the problem to her. Mallory started to work on her writing homework. However, she was so tired from her studies that she fell asleep on top of her notebook. Since she fell asleep before her homework was finished, Mallory had to wake up early the next morning to finish. Mallory's teacher was proud of her for finishing her work.

Not So Wimpy Teacher: Cause and Effect Center

What is the cause of Mallory having to spend extra time studying one spelling word?

Cite two more examples of cause and effect relationships.

Name _____

Mid-Chapter Checkpoint

Personal Math Trainer
Online Assessment and Intervention

Vocabulary

Vocabulary

area
perimeter
square unit

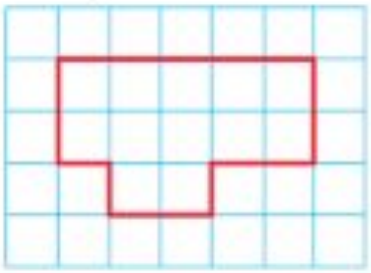
Choose the best term from the box.

1. The distance around a figure is the _____. (p. 625)
2. The measure of the number of unit squares needed to cover a figure with no gaps or overlaps is the _____. (p. 643)

Concepts and Skills

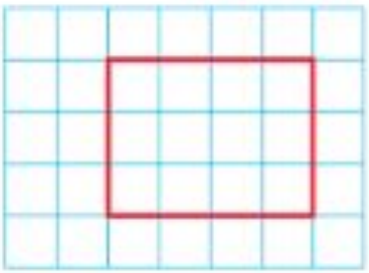
Find the perimeter of the figure. Each unit is 1 centimeter. (3.MD.D.8)

3.



_____ centimeters

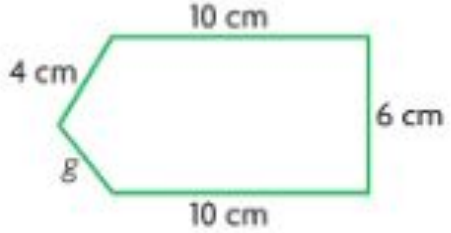
4.



_____ centimeters

Find the unknown side lengths. (3.MD.D.8)

5. Perimeter = 33 centimeters



g = _____ centimeters

6. Perimeter = 32 feet

k = _____ feet

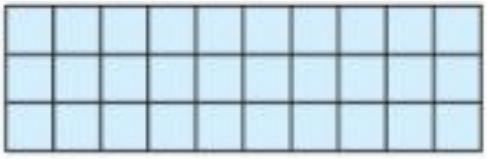
Find the area of the figure. Each unit square is 1 square meter.

(3.MD.C.5, 3.MD.C.5a, 3.MD.C.5b, 3.MD.C.6, 3.MD.C.7, 3.MD.C.7a)

7.

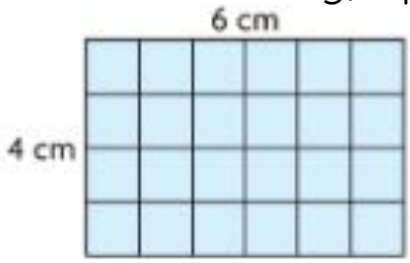
_____ square meters

8.

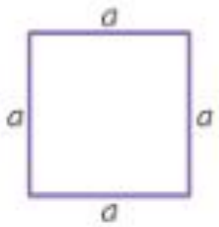


_____ square meters

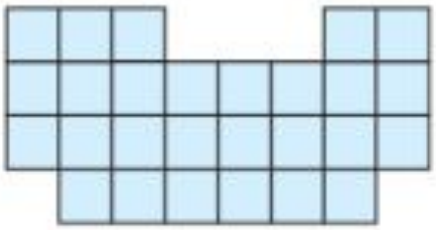
9. Ramona is making a lid for her rectangular jewelry box. The jewelry box has side lengths of 6 centimeters and 4 centimeters. What is the area of the lid Ramona is making? (3.MD.C.7, 3.MD.C.7a)



10. Adrienne is decorating a square picture frame. She glued 36 inches of ribbon around the edge of the frame. What is the length of each side of the picture frame? (3.MD.D.8)



11. Margo will sweep a room. A diagram of the floor that she needs to sweep is shown at the right. What is the area of the floor? (3.MD.C.5b, 3.MD.C.6)



12. Jeff is making a poster for a car wash for the Campout Club. What is the perimeter of the poster? (3.MD.D.8)

13. GO DEEPER A rectangle has two side lengths of 8 inches and two side lengths of 10 inches. What is the perimeter of the rectangle? What is the area of the rectangle? (3.MD.C.5, 3.MD.C.5a, 3.MD.D.8)

READ TO SELF

Choose a "just right" book to read. Read for 20-30 minutes. After reading, fill out the reading response below:

READING RESPONSE

DATE: Wednesday, April 22

BOOK TITLE:

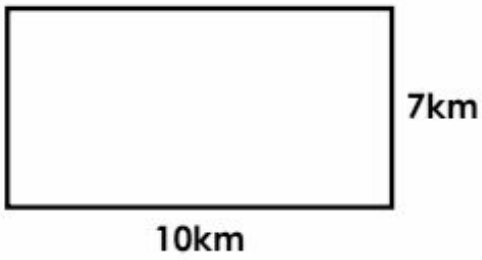
Write a short summary of what you read today!

RESPOND

WORD WORK

1. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

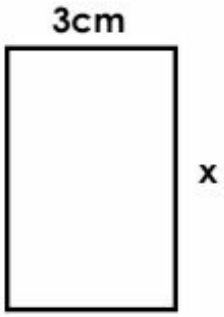


area = _____

2. Area of a Rectangle

Find the length of **side x** of the rectangle. Remember to label the units in your answer.

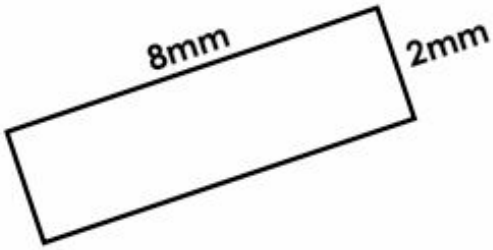
area = 15 sq. cm



side x = _____

3. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

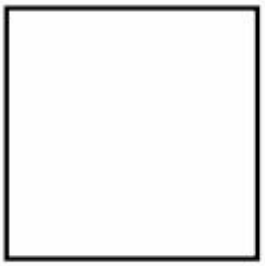


area = _____

4. Area of a Rectangle

Find the length of **each side** of the rectangle. Remember to label the units in your answer.

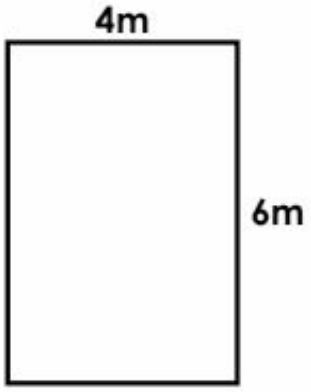
area = 81 sq. m



each side = _____

5. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

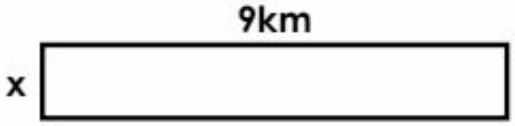


area = _____

6. Area of a Rectangle

Find the length of **side x** of the rectangle. Remember to label the units in your answer.

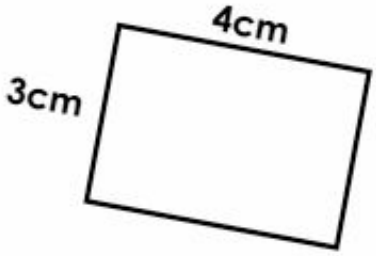
area = 18 sq. km



side x = _____

7. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

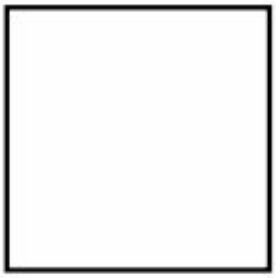


area = _____

8. Area of a Rectangle

Find the length of **each side** of the rectangle. Remember to label the units in your answer.

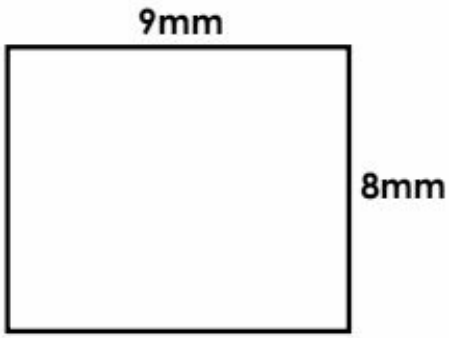
area = 1 sq. mm



each side = _____

9. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

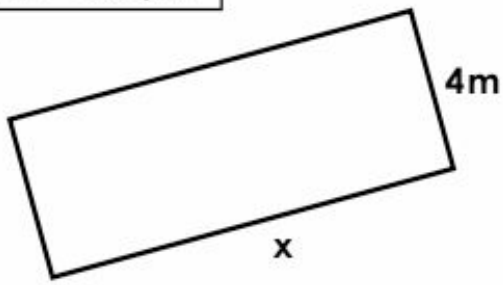


area = _____

10. Area of a Rectangle

Find the length of **side x** of the rectangle. Remember to label the units in your answer.

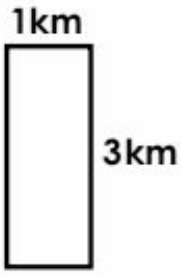
area = 40 sq. m



side x = _____

11. Area of a Rectangle

Find the **area** of the rectangle. Remember to include the units in your answer.

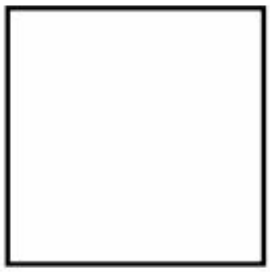


area = _____

12. Area of a Rectangle

Find the length of **each side** of the rectangle. Remember to label the units in your answer.

area = 36 sq. cm

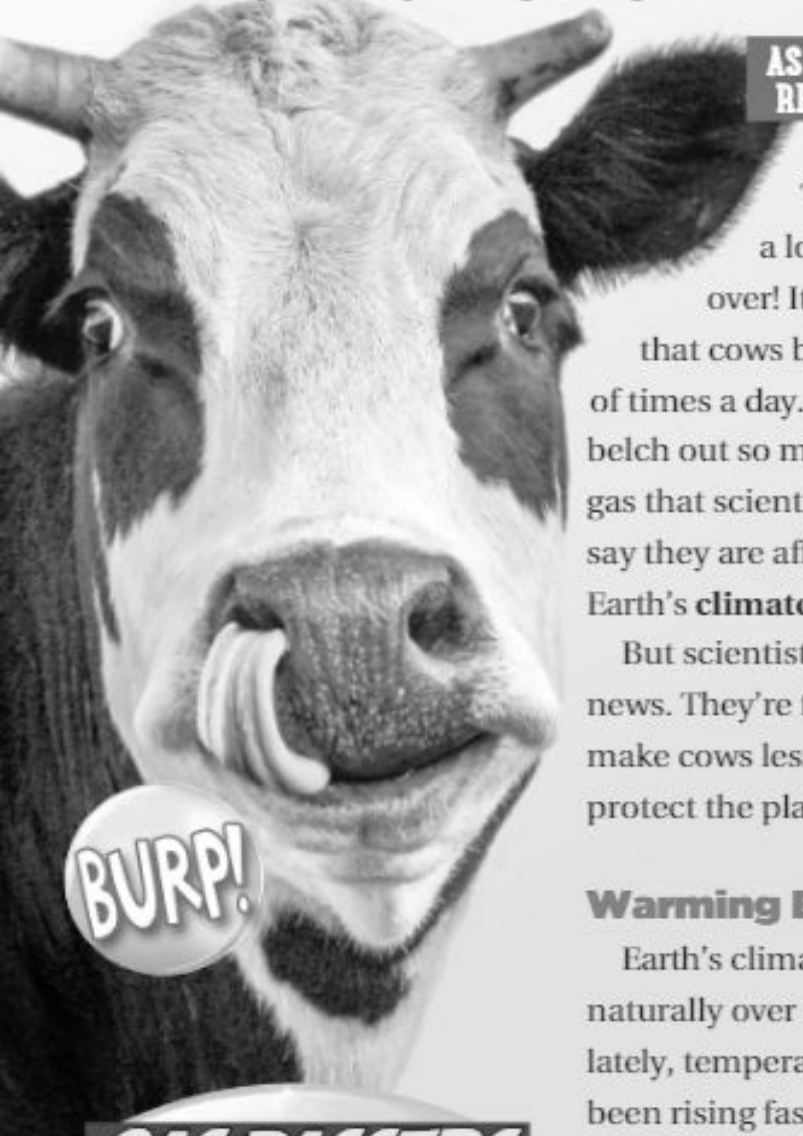


each side = _____

Thursday, April 23

CAN COWS CHANGE

Experts say that getting cows to burp less could help protect Earth.



AS YOU READ Look for two ways that harmful greenhouse gases get into Earth's atmosphere.

Think you burp a lot? Moooove over! It turns out that cows burp dozens of times a day. In fact, they belch out so much gas that scientists say they are affecting Earth's **climate**.

But scientists have good news. They're finding ways to make cows less gassy—and protect the planet.

Warming Earth

Earth's climate changes naturally over time. But lately, temperatures have been rising faster than ever. Scientists say that human activities are mostly to blame. How? We burn **fossil fuels** like oil, coal, and gasoline to power our cars, homes, and factories. Burning these fuels sends invisible gases like carbon dioxide into the atmosphere. Experts call these gases "greenhouse gases." They trap heat from the sun and cause Earth to warm up.

According to the U.S. Environmental Protection Agency (EPA), the burning of fossil fuels is responsible for most of the greenhouse gases the U.S. produces. But cows are part of the problem too.

Got Gas?

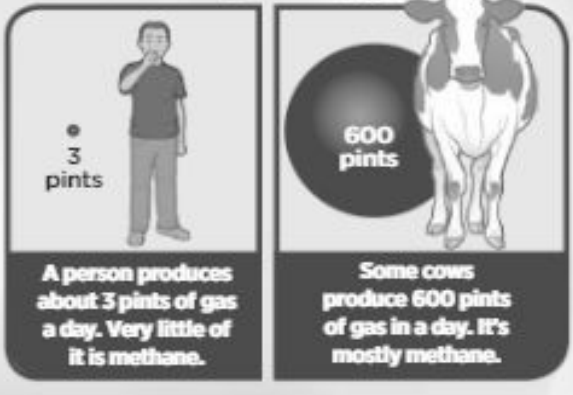
Cows are gassy because of the way they digest food. They dine on grass and other plants. Inside their stomachs are tiny living things called microbes. Microbes break plants down into parts that cows need for energy.

WORDS TO KNOW

climate: the usual weather in a place over time
fossil fuels: fuels formed from the remains of prehistoric plants and animals

GAS PASSERS

How do humans compare with cows when it comes to producing gas?



A person produces about 3 pints of gas a day. Very little of it is methane.

Some cows produce 600 pints of gas in a day. It's mostly methane.

THE CLIMATE?

As the microbes work, they create gases. The main one they make is a powerful greenhouse gas called methane. It builds up in a cow's stomach until it comes out, mostly in burps.

U.S. farmers raise about 94 million cows for meat and milk. Their gas adds up. The EPA says that cows, sheep, and other livestock cause nearly 4 percent of the greenhouse gases made in the U.S. In other parts of the world, these animals cause more of the total.

CLICK HERE
Watch our video about climate change.

Belch Battle

Experts are working hard to tackle this problem. Some are developing a shot that will help cows digest food without making so much gas. And an inventor in Argentina is making a mask that farmers could put on cows. It would break methane down into safer substances.

At the University of California, scientists have another idea. They're experimenting with adding ingredients to cows' food. Their studies show that adding seaweed or oils from certain plants to food makes a cow much less gassy.

"We are seeing some success stories," says scientist Frank Mitloehner. "Cows might only be responsible for a fraction of greenhouse gases, but every little bit we can cut helps."

WHAT IS THE GREENHOUSE EFFECT?

1. Energy from the sun provides Earth with light and heat.
2. Clouds and Earth's surface reflect some energy back toward space.
3. Greenhouse gases trap some of that reflected energy in the atmosphere, warming the planet further.
4. People burn fossil fuels to power cars, homes, and businesses. That releases more greenhouse gases into the air. Cows release gases, too.
5. More heat is trapped in the atmosphere, causing temperatures on Earth to rise.

TALK ABOUT IT Cow burps are just one source of greenhouse gases. What small effect do they have on the climate?

News

Thursday, April 23

Name: _____

Close-Reading Questions

Refer to "Can Cows Change The Climate?" to respond to the questions below. Reread the article to find details that support your answers. Remember to write in complete sentences.

1. Why has Earth's temperature been rising faster lately?

_____

_____

_____

_____

_____

_____

_____

2. Summarize why cows are gassy.

_____

_____

_____

_____

_____

_____

_____

3. Explain the diagram on page 3.

_____

_____

_____

_____

_____

_____

Optional

First, go outside and take a walk! What do you see? Make a list of things you notice that are both good for the environment and harmful to the environment. Then, write about what you noticed and what you might do to make the earth a better place!

I CAN HELP THE EARTH BY...

Name Optional

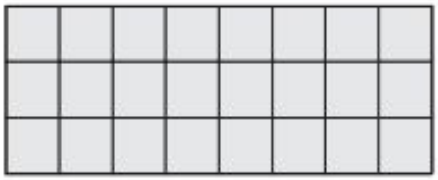
Use Area Models

COMMON CORE STANDARDS CC.3.MD.7, CC.3.MD.7a

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

Find the area of each shape. Each unit square is 1 square foot.

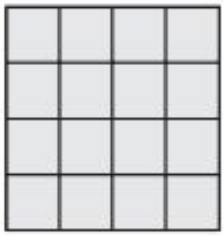
1.



There are 3 rows of 8 unit squares.
$3 \times 8 = 24$

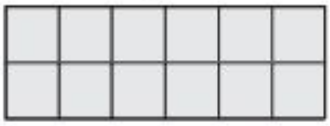
24 square feet

2.

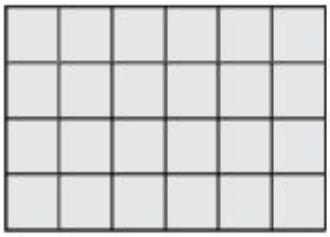


Find the area of each shape. Each unit square is 1 square meter.

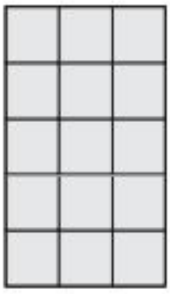
3.



4.

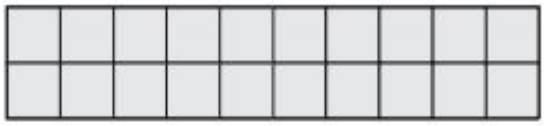


5.



Problem Solving REAL WORLD

6. Landon made a rug for the hallway. Each unit square is 1 square foot. What is the area of the rug?



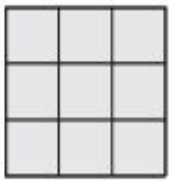
7. Eva makes a border at the top of a picture frame. Each unit square is 1 square inch. What is the area of the border?

Optional

TEST PREP

Lesson Check (CC.3.MD.7, CC.3.MD.7a)

1. The entrance to an office has a tiled floor. Each square tile is 1 square meter. What is the area of the floor?



Ⓐ 8 square meters
Ⓑ 9 square meters
Ⓒ 10 square meters
Ⓓ 12 square meters

2. Ms. Burns buys a new rug. Each unit square is 1 square foot. What is the area of the rug?

Ⓐ 5 square feet
Ⓑ 7 square feet
Ⓒ 10 square feet
Ⓓ 12 square feet

Spiral Review (CC.3.OA.4, CC.3.NF.3d, CC.3.MD.1, CC.3.MD.8)

3. Ann and Bill are comparing fraction strips. Which statement is correct? (Lesson 9.2)

Ⓐ $\frac{3}{8} > \frac{5}{8}$
Ⓑ $\frac{3}{4} < \frac{1}{4}$
Ⓒ $\frac{3}{6} > \frac{4}{6}$
Ⓓ $\frac{1}{3} < \frac{2}{3}$

4. Claire bought 6 packs of baseball cards. Each pack had the same number of cards. If Claire bought 48 baseball cards in all, how many cards were in each pack? (Lesson 7.8)

Ⓐ 54
Ⓑ 42
Ⓒ 8
Ⓓ 6

5. Austin left for school at 7:35 A.M.. He arrived at school 15 minutes later. What time did Austin arrive at school? (Lesson 10.4)

Ⓐ 7:40 A.M.
Ⓑ 7:50 A.M.
Ⓒ 7:55 A.M.
Ⓓ 8:00 A.M.

6. Wyatt's room is a rectangle with a perimeter of 40 feet. The width of the room is 8 feet. What is the length of the room? (Lesson 11.3)

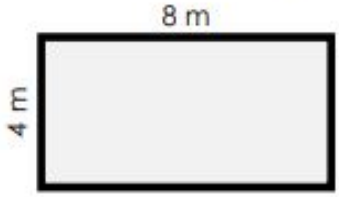
Ⓐ 5 feet
Ⓑ 12 feet
Ⓒ 16 feet
Ⓓ 32 feet

Name: Optional

Area of a Rectangle

To find the area of a rectangle, multiply the length by the width.

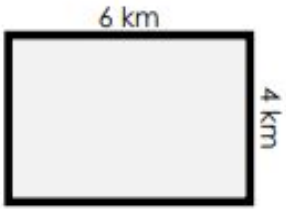
example:



area = 4 m x 8 m = **32 square meters**

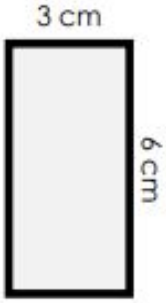
Find the area of each rectangle by multiplying

a.



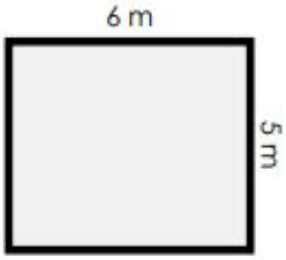
area = _____

b.



area = _____

c.



area = _____

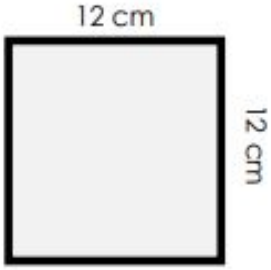
d.

area = _____

e.

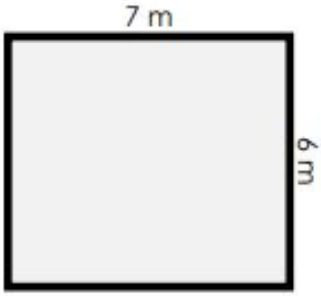
area = _____

f.



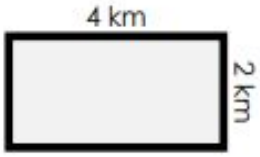
area = _____

g.



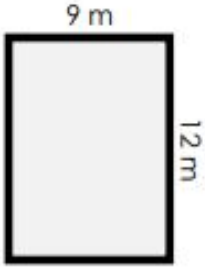
area = _____

h.



area = _____

i.



area = _____

Name Date

Optional

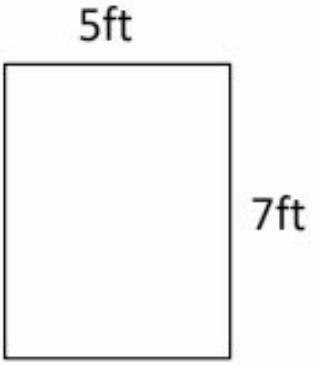
AREA SHEET 3

Work out the area of the following rectangles. They are not to scale.

1)

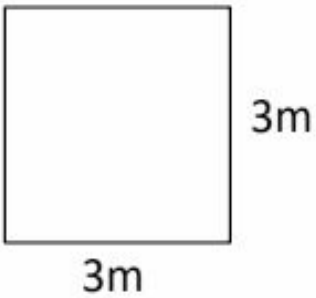
Area = _____ square cm

2)



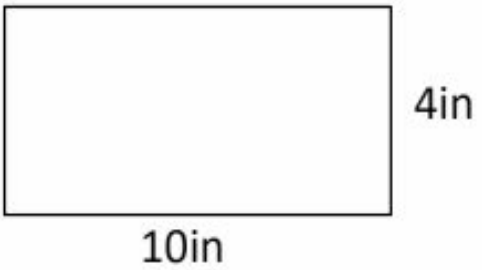
Area = _____ square ft

3)



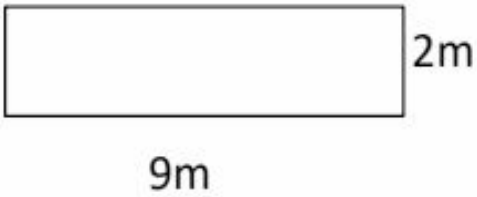
Area = _____ square m

4)



Area = _____ square in

5)



Area = _____ square m

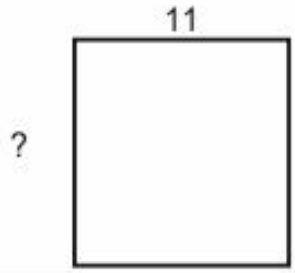
6)

Area = _____ square cm

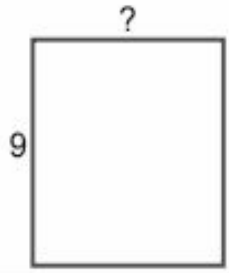
Name: Optional _____ Date: _____

Area / Perimeter Worksheet

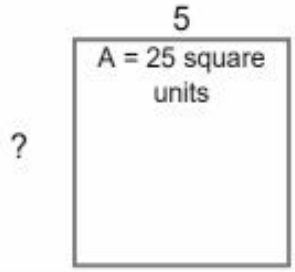
1 a. Find the missing side length, when the perimeter is 44.



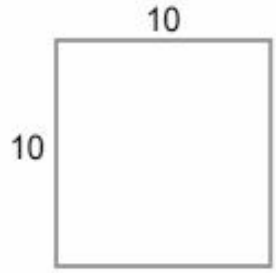
1 b. Find the missing side length, when the perimeter is 34.



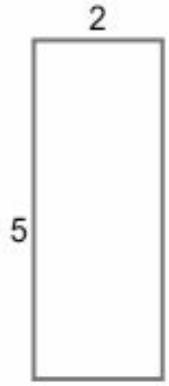
2 a. Find the missing side length, when the area is 25 square units.



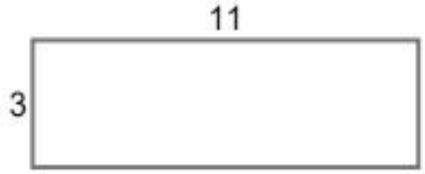
2 b. Find the perimeter of the square.



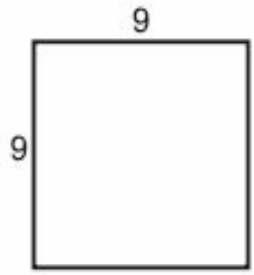
3 a. Find the perimeter of the rectangle.



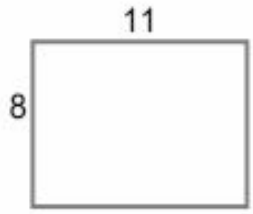
3 b. Find the area of the rectangle.



4 a. Find the area of the square.



4 b. Find the area of the rectangle.



Name: Optional

Area of a Rectangle

On the grid below, draw a quadrilateral that has an area of 20 square units.

On the grid below, draw two squares and label them **A** and **B**.
Square **A** has an area of 4 square units.
Square **B** has an area 9 times greater than square **A**.

Name: Optional _____

Cause and Effect: Match Them!

Match the cause to the effect.

	Cause	Effect
1. _____	The car ran a red light.	A. The horses were thirsty.
2. _____	Ben stayed up late.	B. She fell down.
3. _____	The students were quiet in class.	C. She was hungry at lunch.
4. _____	It rained.	D. He was sleepy the next day.
5. _____	Lydia skipped breakfast.	E. It boiled over.
6. _____	It was very hot outside.	F. Everyone laughed.
7. _____	Lucy's shoes weren't tied.	G. It sank.
8. _____	The boat had a leak.	H. Chris got wet.
9. _____	The puppy chased its tail.	I. The teacher gave them a reward.
10. _____	There was too much water in the pot.	J. Another car hit it.

Name: Optional _____

Cause and Effect

Directions: Read the effect and write your own cause for each sentence.

1. Cause: _____

   Effect: Halley tripped and fell down.

2. Cause: _____

   Effect: I won first prize in the fishing contest.

3. Cause: _____

   Effect: The tomato plants died.

4. Cause: _____

   Effect: The light wouldn't turn on.

5. Cause: _____

   Effect: The kitten couldn't find its way home.

6. Cause: _____

   Effect: Everyone had turkey for dinner.

7. Cause: _____

   Effect: The baby started to cry.

8. Cause: _____

   Effect: I got sick.

Name: Optional

Cause and Effect

Directions: Fill in an effect for each of the causes below.

1. The children were bored. _____
2. All the frogs jumped high. _____
3. David did not study. _____
4. Our house is old. _____
5. It was cold on Thursday. _____
6. We heard a parade. _____
7. Grandma told funny jokes. _____
8. Our cat Tiny sat in the sun. _____
9. My homework was hard. _____
10. Their Dad was late. _____
11. The teacher was yelling. _____
12. Five dogs were barking. _____
13. Gerry's CD player broke. _____
14. Everyone was hungry. _____
15. Two cars crashed. _____