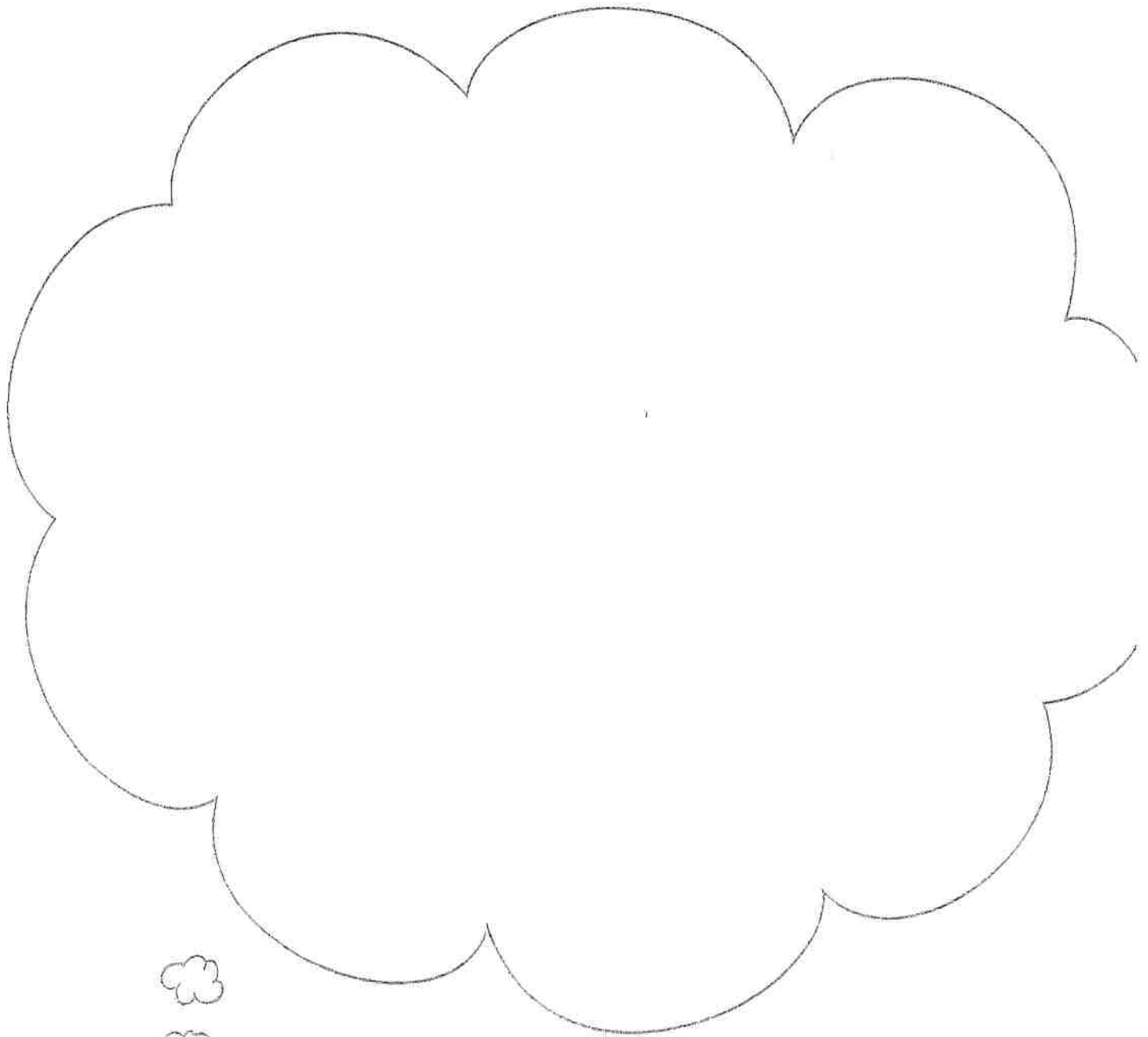


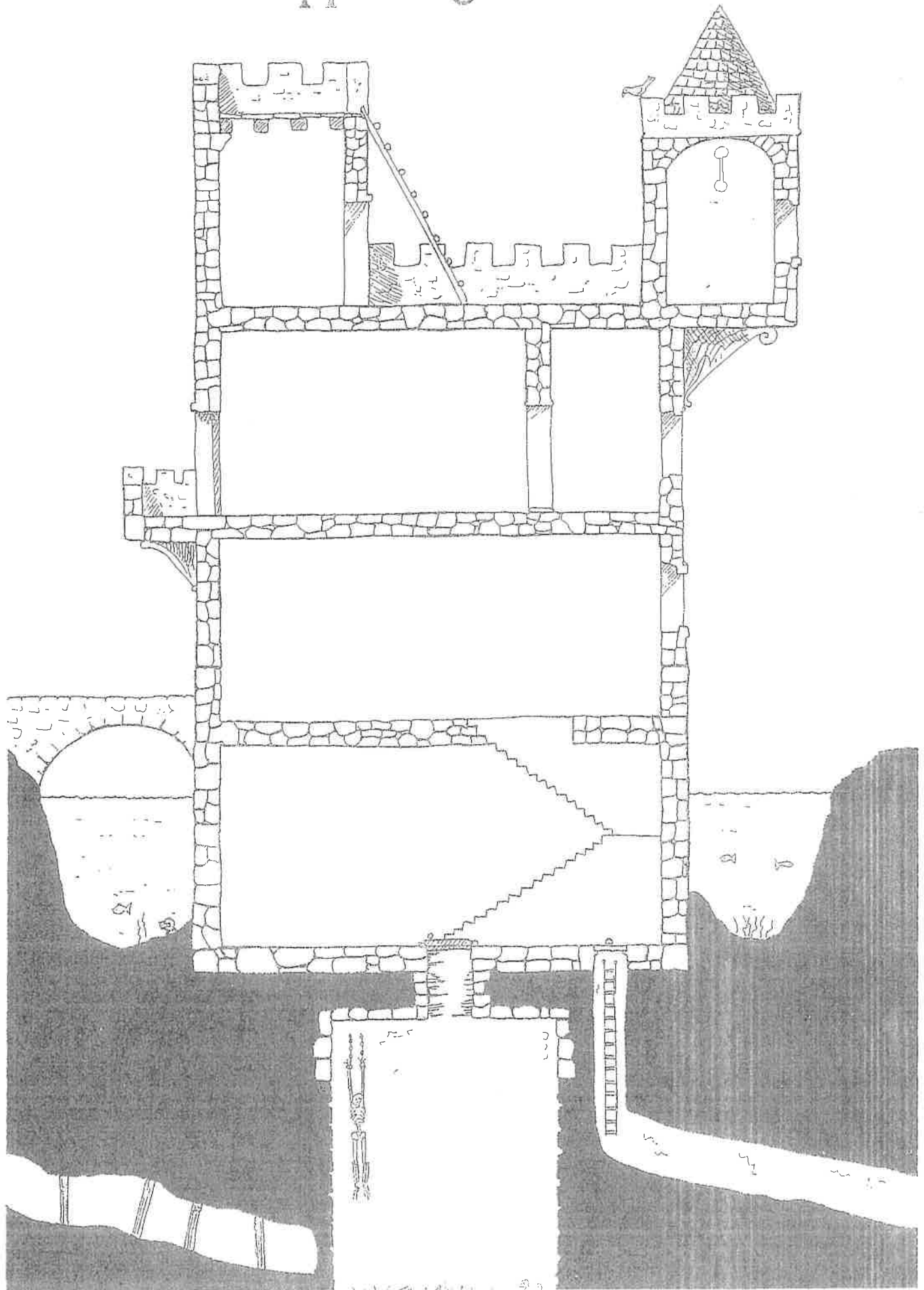
My perfect vacation . . .



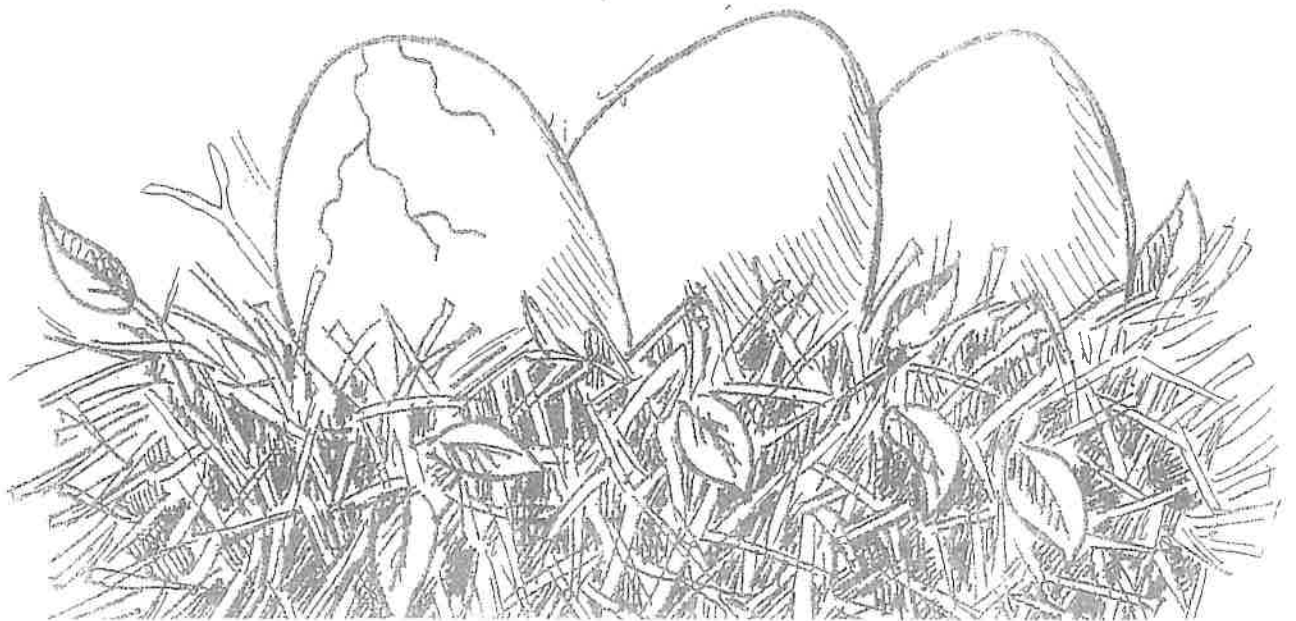
Whoops!



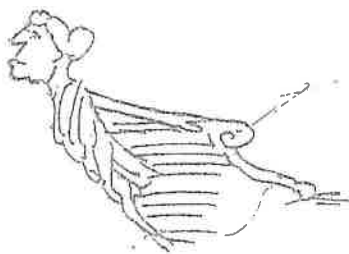
What's happening in the castle?



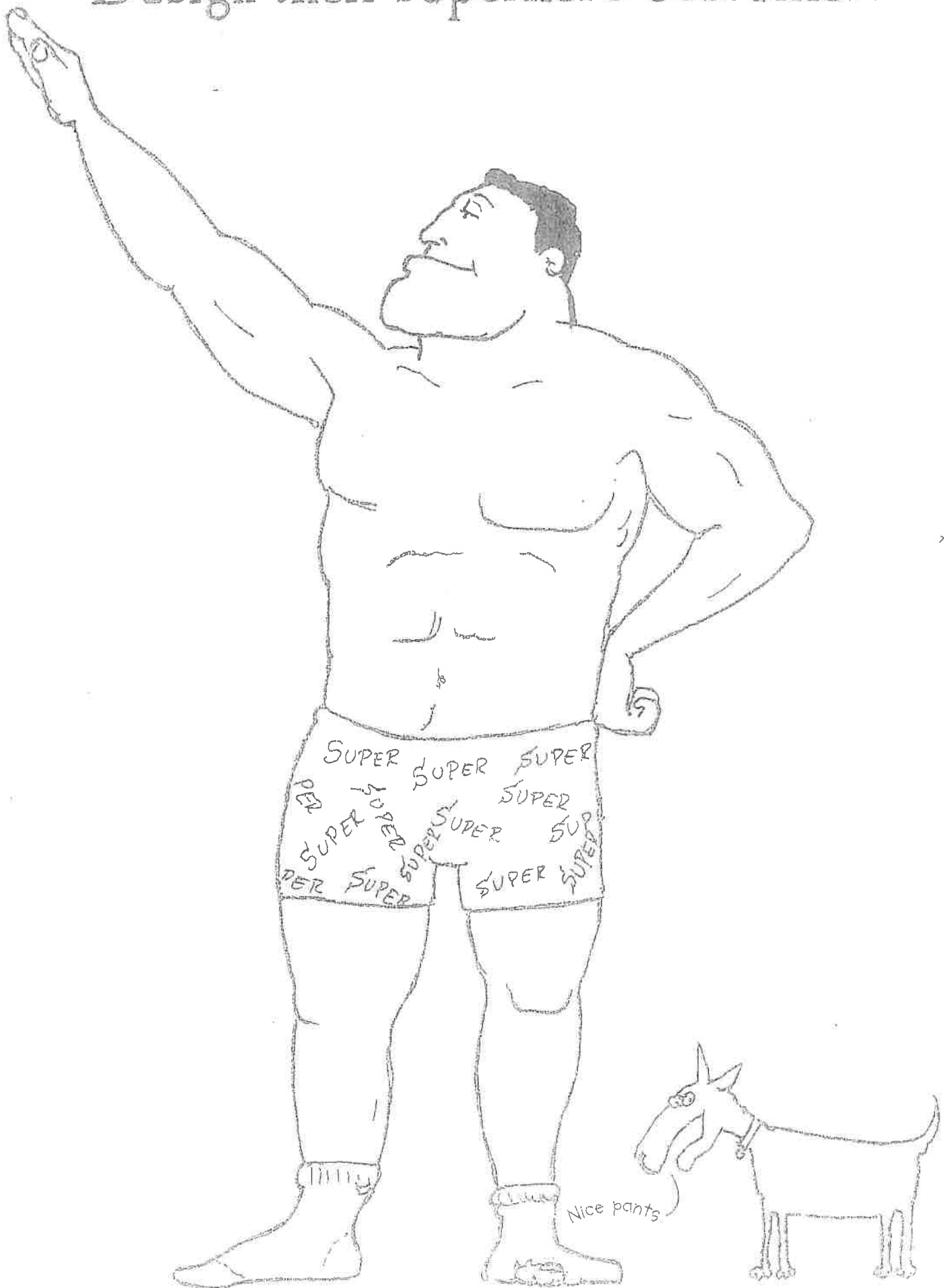
Who is sitting on the eggs?



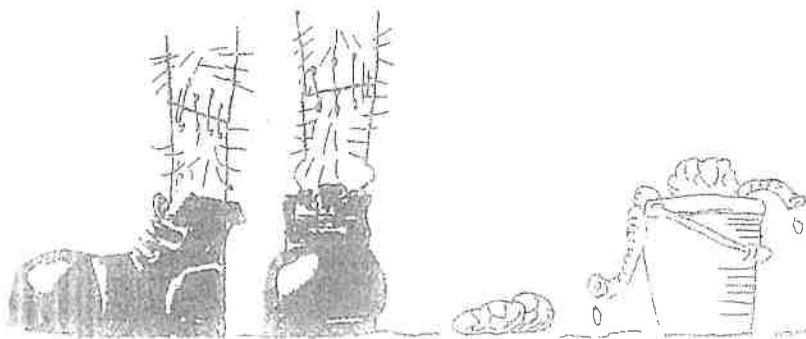
# Ship ahoy!



Design their superhero costumes.



Draw Dr Frankenstein's monster.

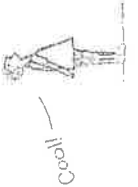
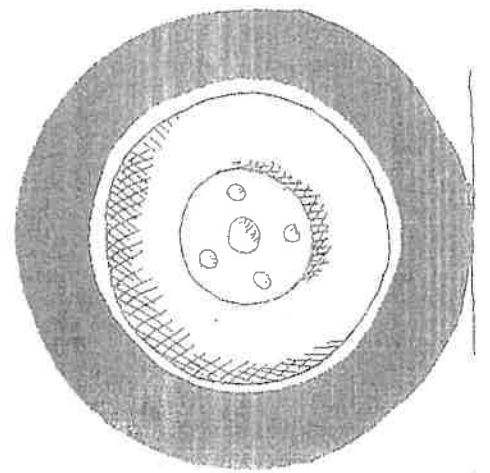
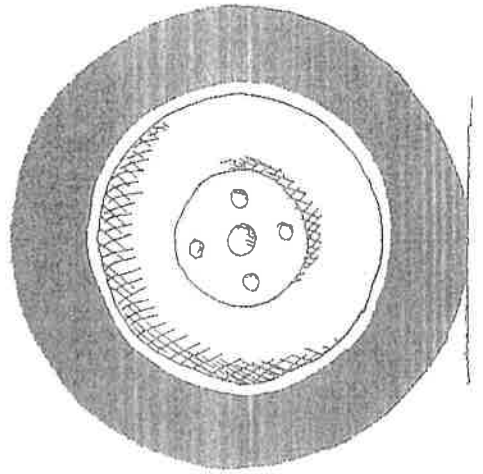
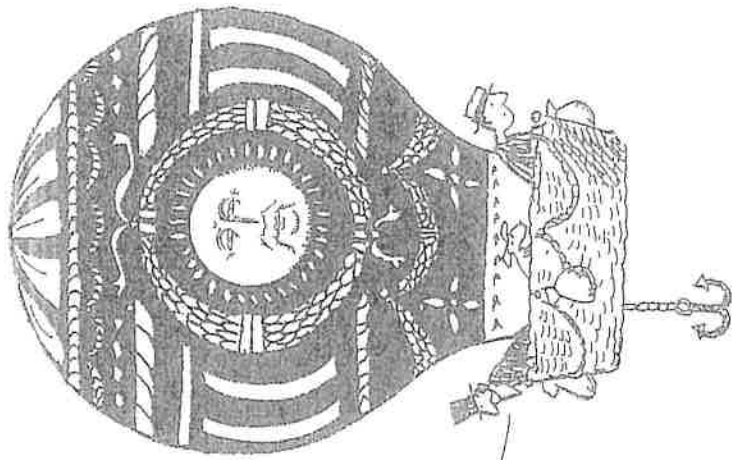




What is nibbling his toes?



# Where are they going to land?



Eyes Only

# Spaceship New Design

$$\frac{2+b^2}{a} \times \sqrt{\frac{2V}{a^2} \times \frac{V^2}{a^2} \times \frac{a^2}{b^2}} = 4 \times \frac{a}{b^2} + \sqrt{2W} = 3207$$

710

planet

earth



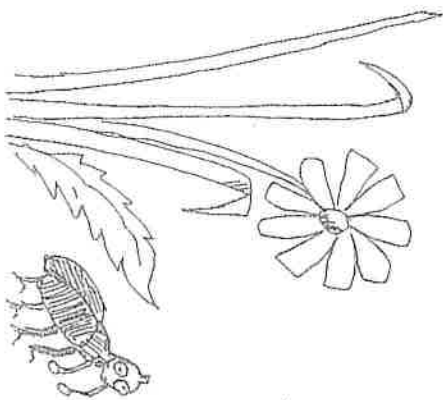
~~$$4 + \sqrt{224} \times 22 \sqrt{x+y}$$~~

$$E = 17x^2$$

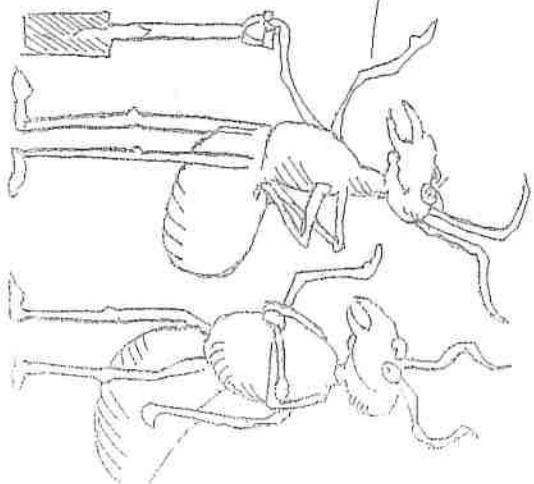
Add Wild Bill's bucking bronco.

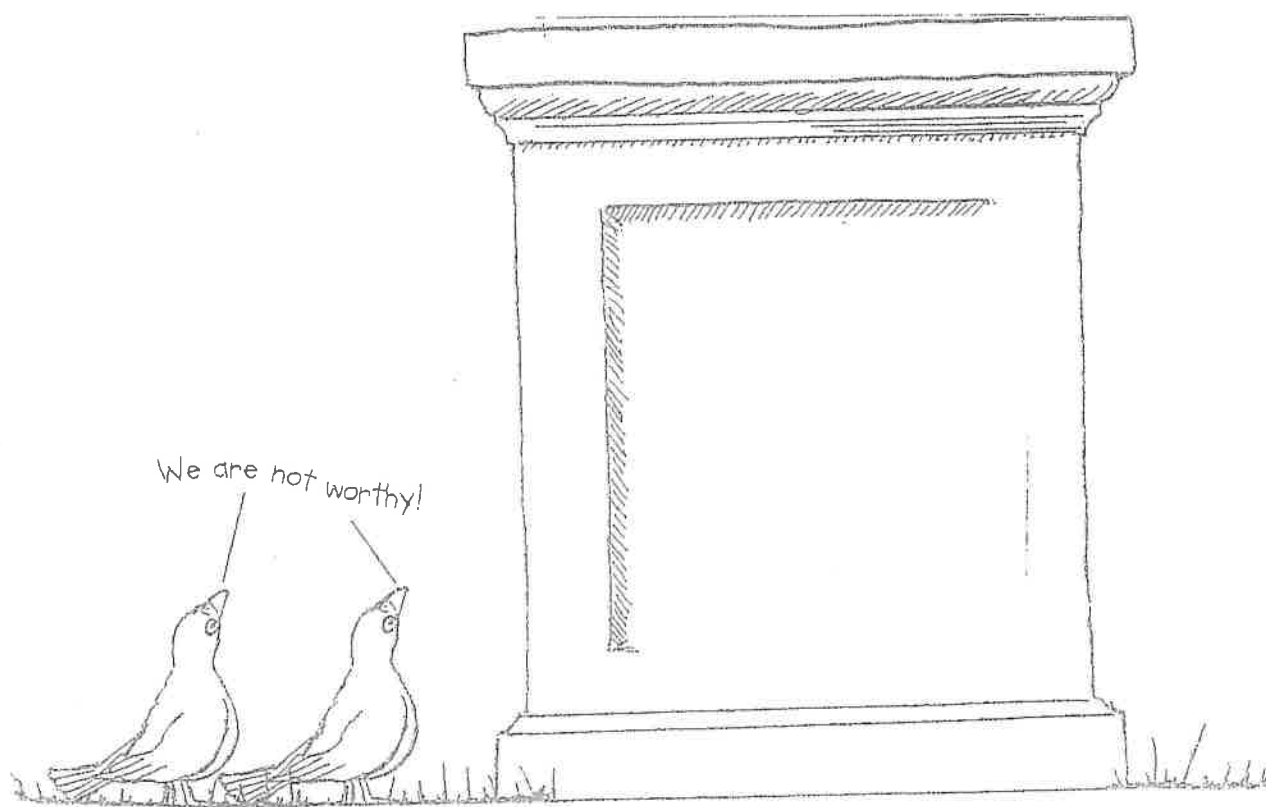


What did these ants build?

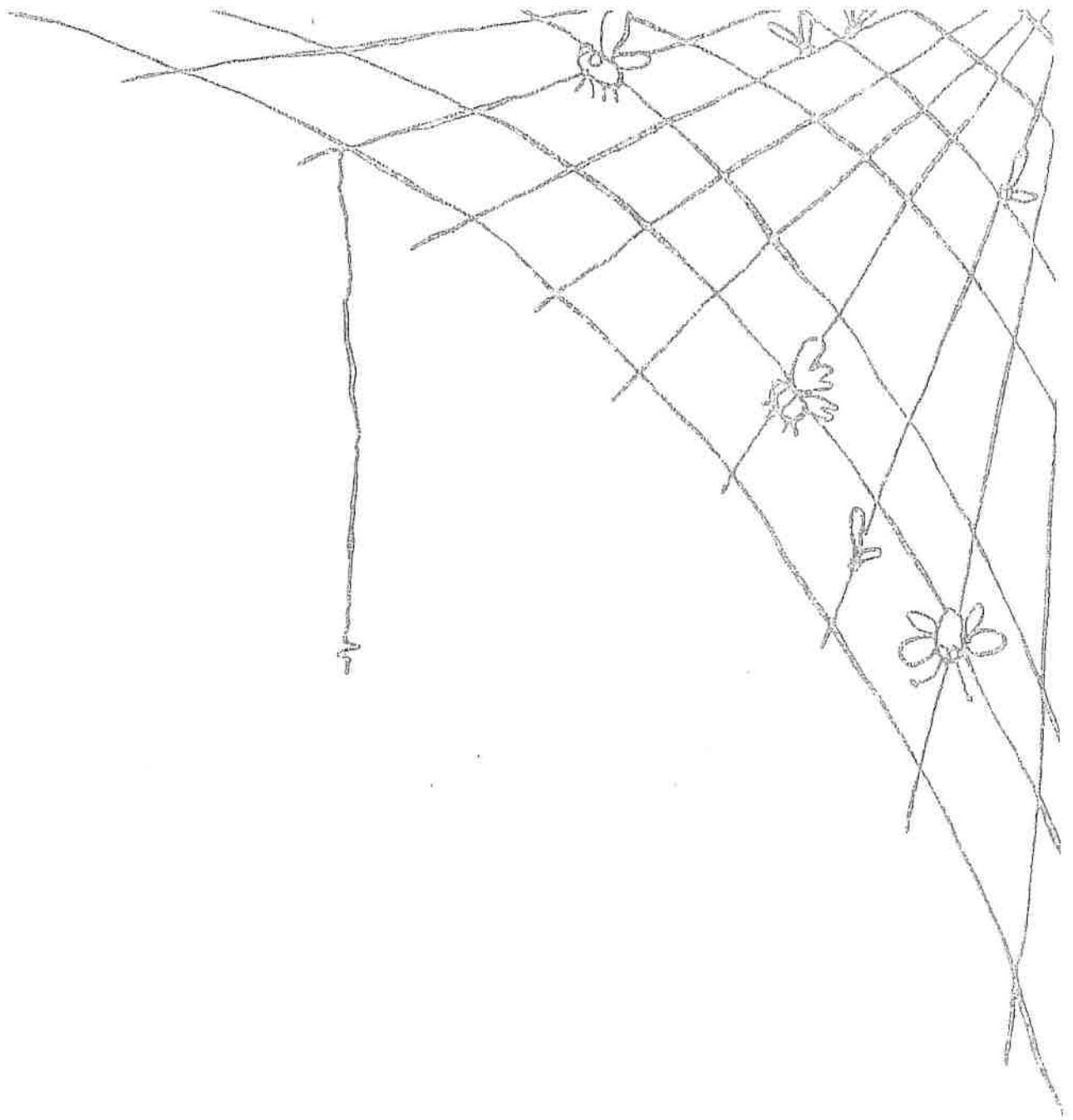


Very pleased-ant



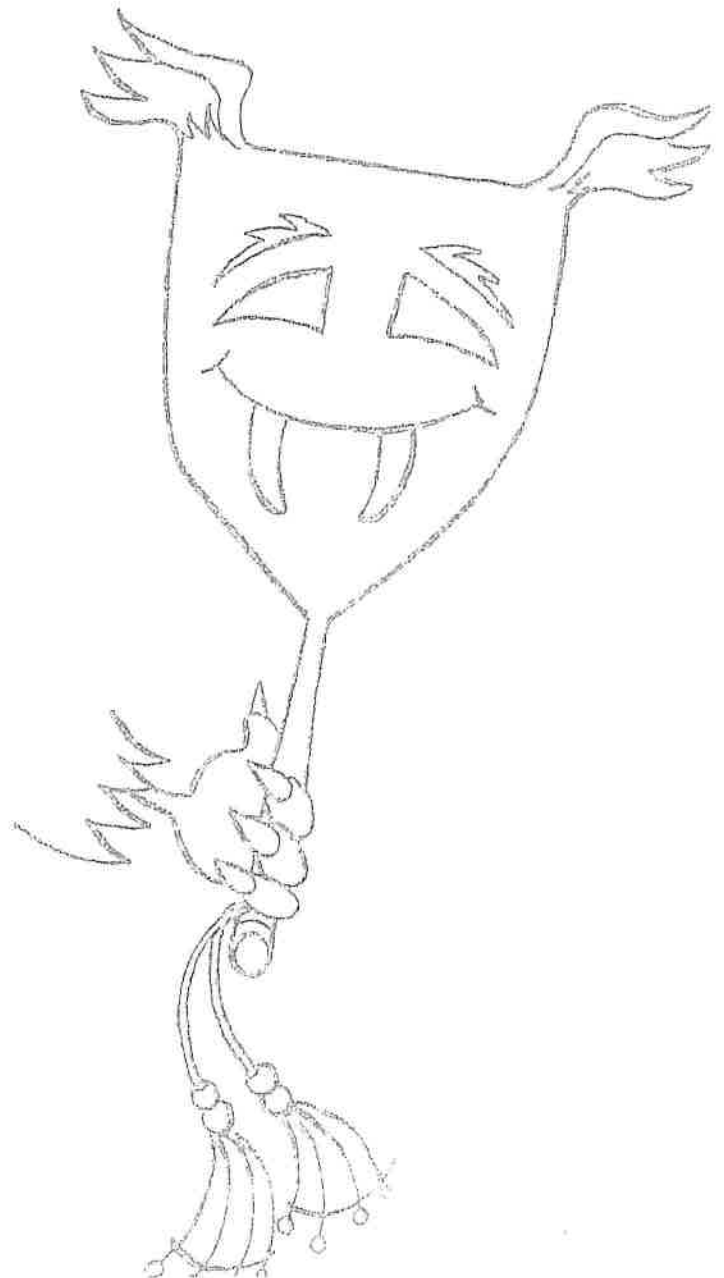


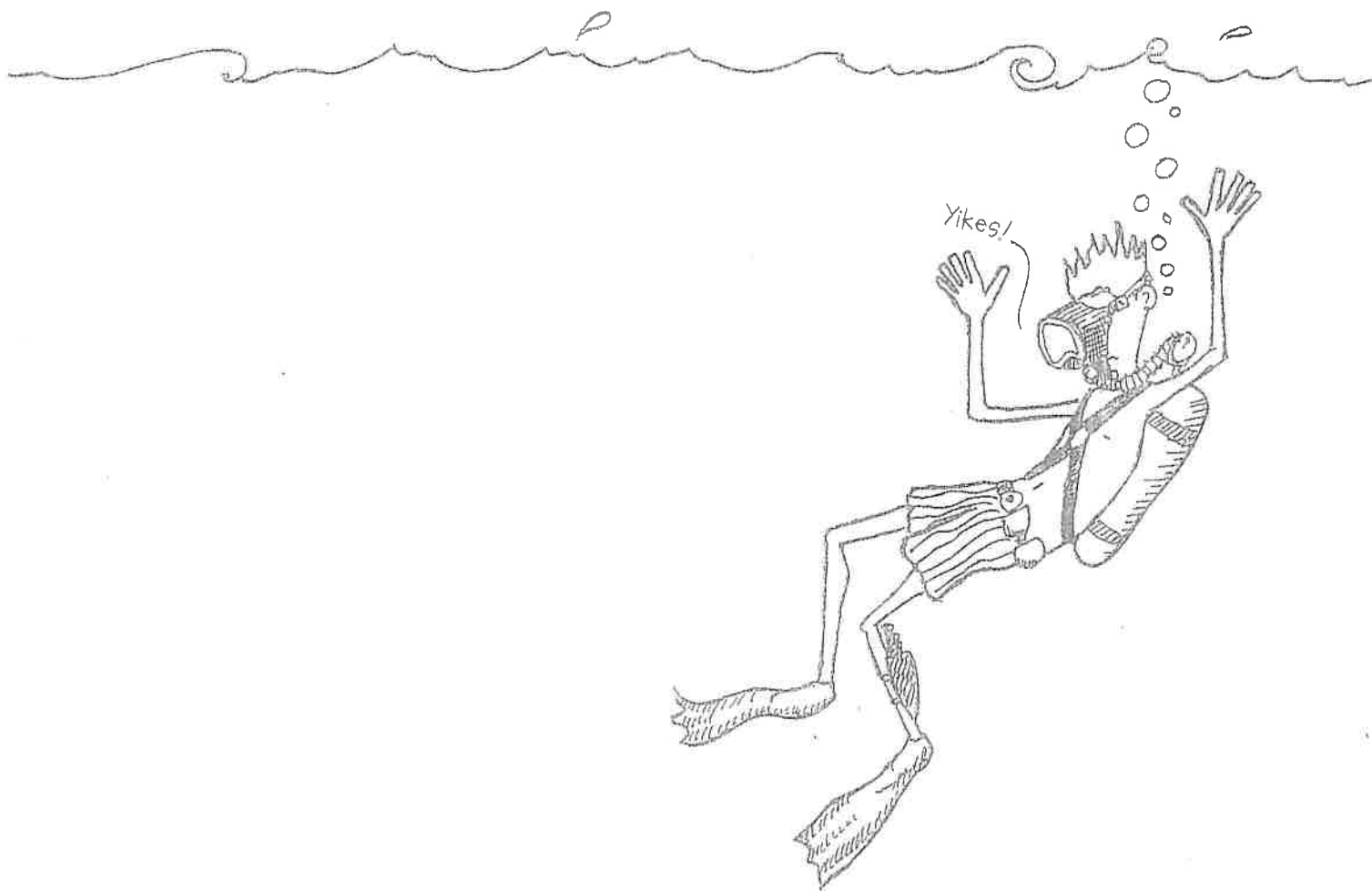
Who is your hero?



Draw a hairy spider.

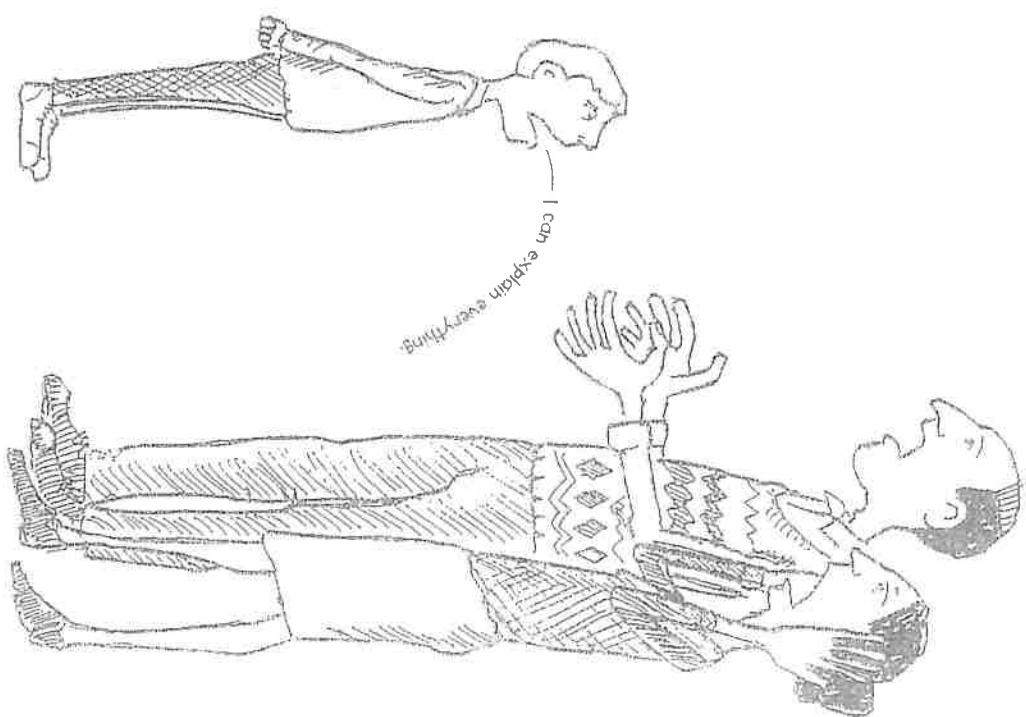
Who is behind the mask?



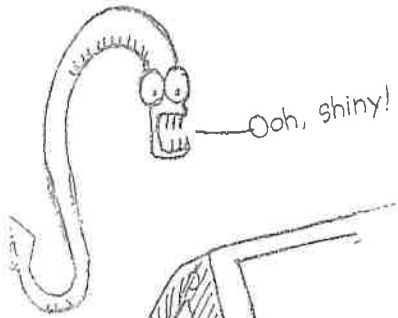
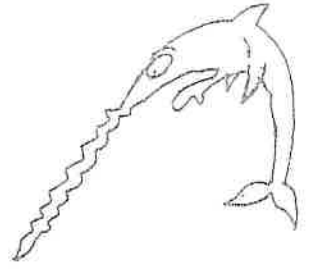
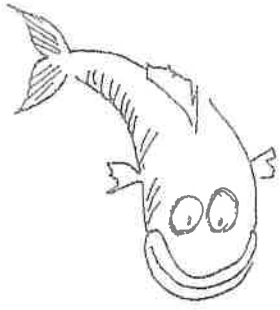




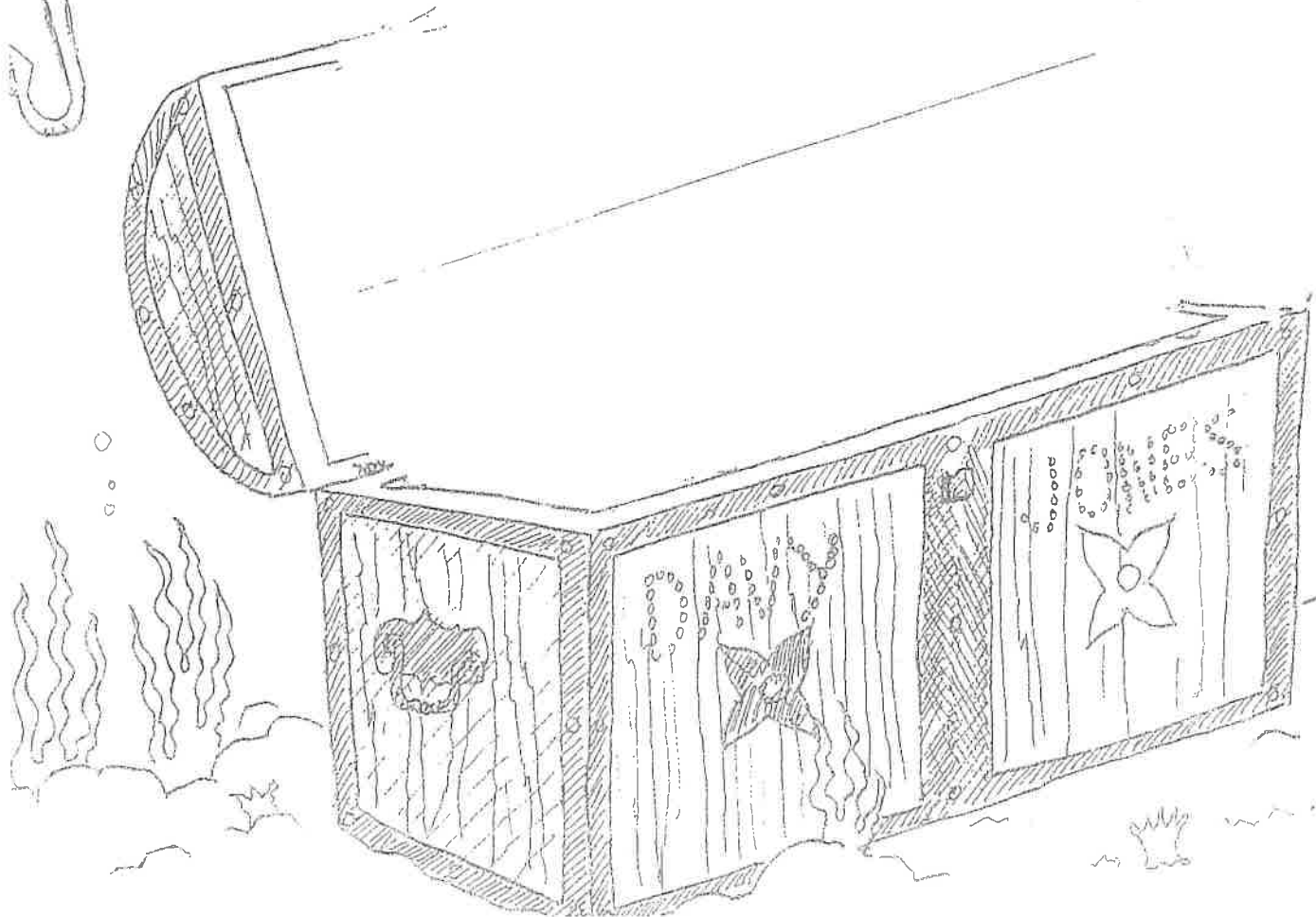
What did he do?



# SILVER IN TUNNELS—WHAT'S IN THE CHEST?



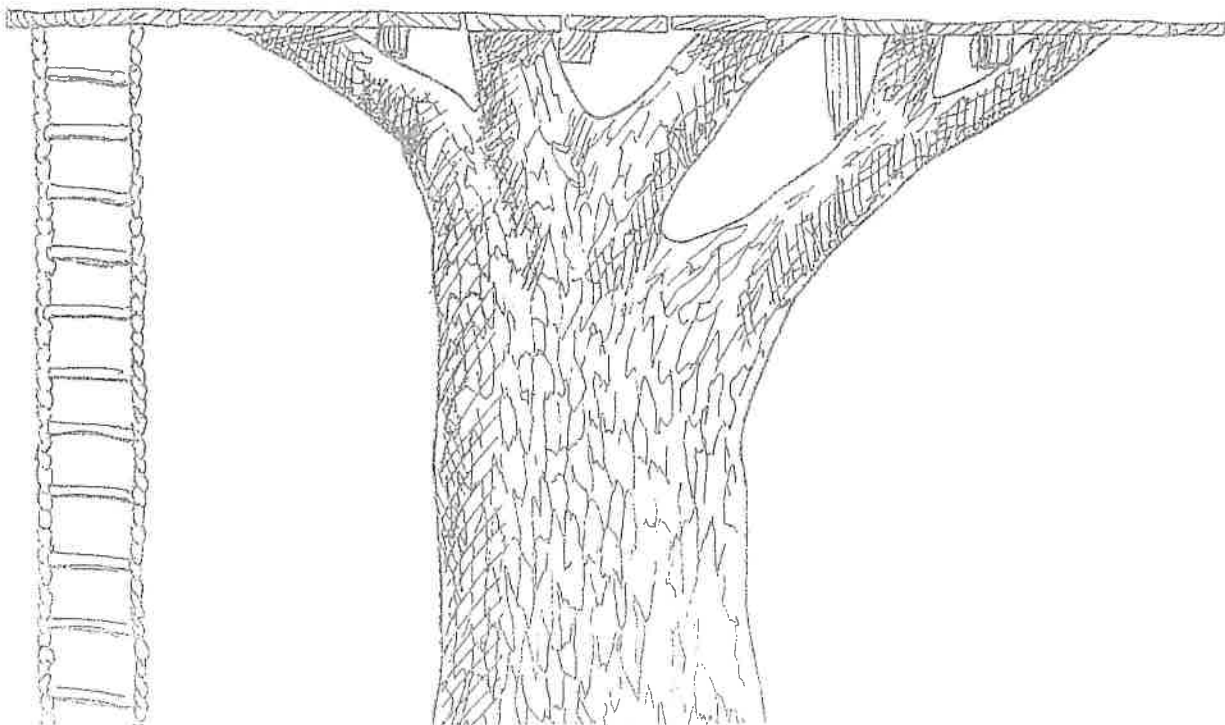
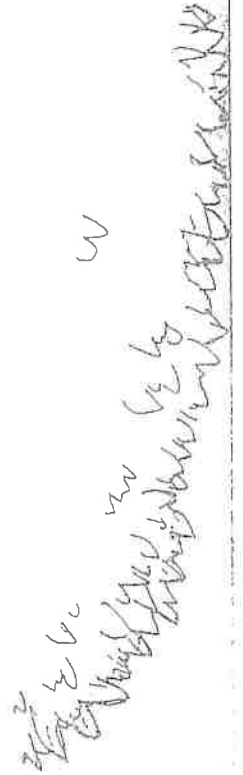
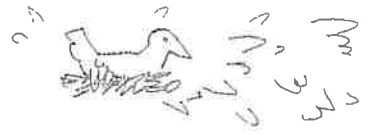
Ooh, shiny!

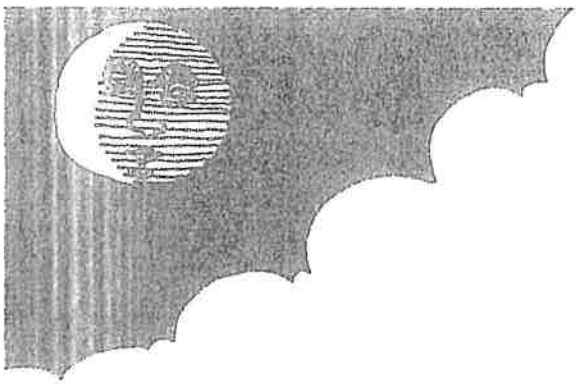


# Design a great gadget.



## Construct a cool tree house.

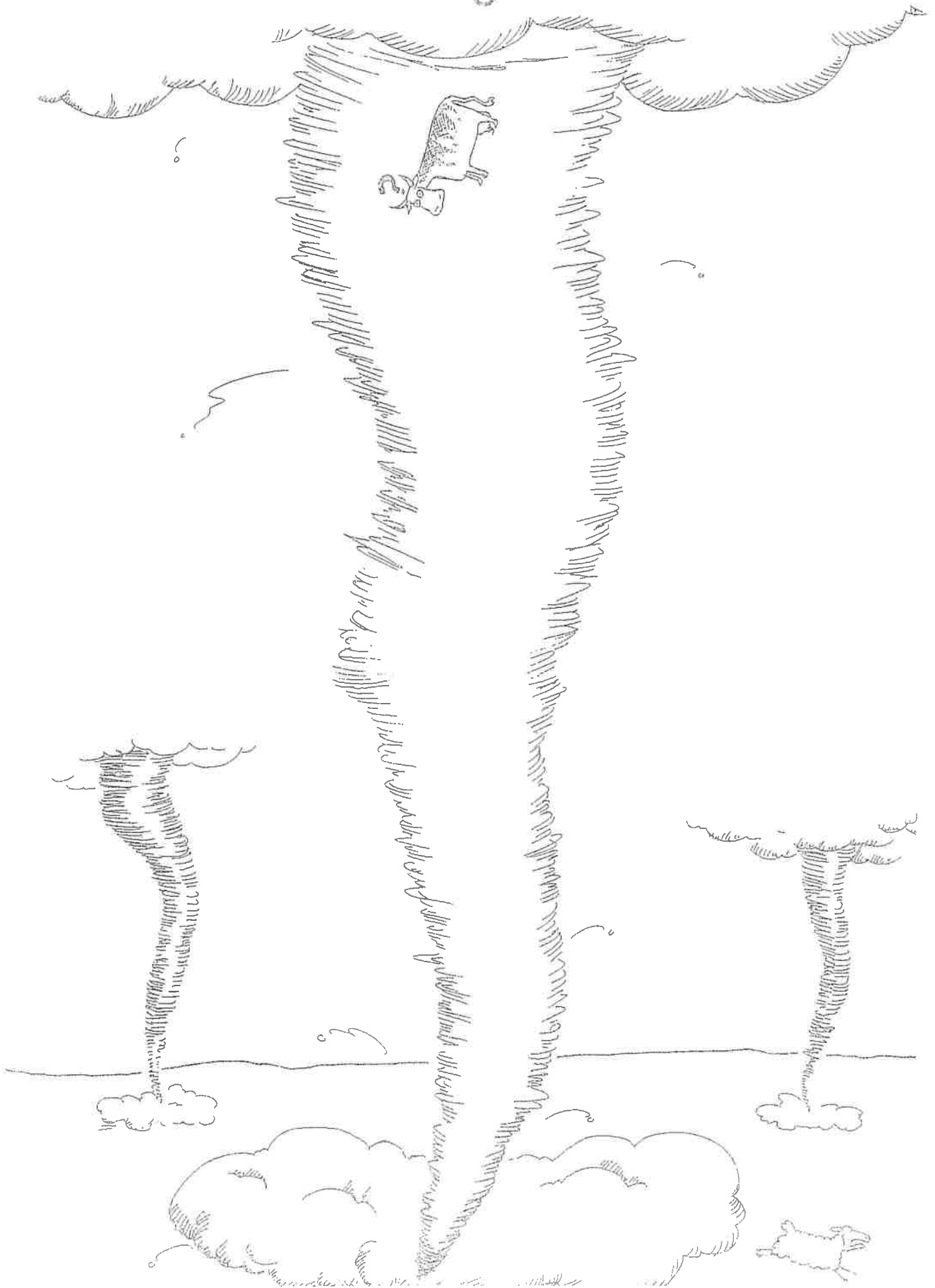




Launch the rocket.



# What is twisting in the tornado?



# Science

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

Grade 5 - Directions: Please complete the following New York State Science Tests as a review of materials taught throughout the year and previous years.

Thank you!

Mrs. Forgione & Ms. Pitaro



Now read Sample Question **S-2**. Mark your answer on the answer sheet in the box showing the row of answer circles for Sample Question **S-2**.

**S-2** Which animal has wings?

- A bird
- B frog
- C mouse
- D rabbit

The correct answer is **bird**, which is next to letter **A**. On your answer sheet, you should have filled in circle **A**.

Answer all 30 questions on Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some of the questions, but do the best you can on each one.

When you have finished Part I, go on to Part II. Answer all of the questions in Part II in the space for each question.



3 A basic need of both plants and animals is

- A soil
- B light
- C shelter
- D water

4 An example of an inherited trait is

- A riding a bicycle
- B having a broken arm
- C having brown eyes
- D living in New York State

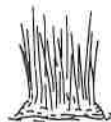
5 The diagram below shows a mature parent plant.



Which young plant is most likely the offspring of this mature parent plant?



A



B



C

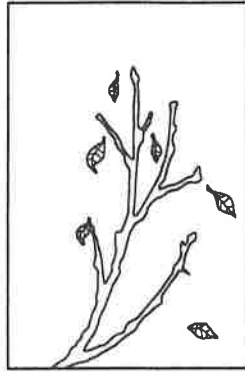


D

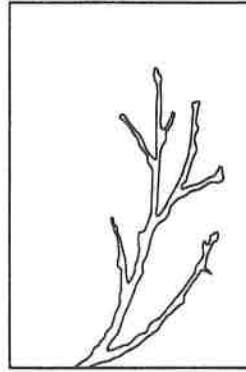
- 9 The diagrams below show the same branch from a tree in New York State during each of the four seasons.



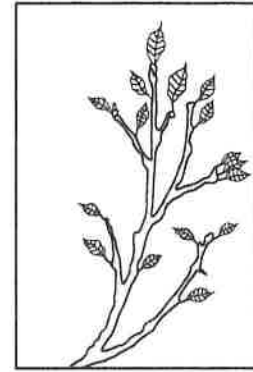
A



B



C

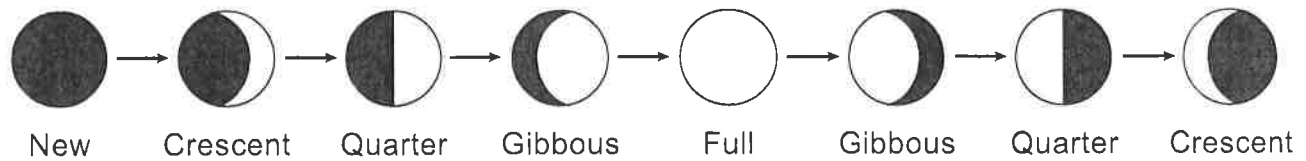


D

If students took a field trip during January, which diagram would most likely represent what the branches on most trees would look like in New York State?

- A A
  - B B
  - C C
  - D D
- 10 As the length of daylight shortens and the temperatures cool, geese and some other birds fly south from New York State. This behavioral change is known as
- A communicating
  - B hunting
  - C migration
  - D hibernation
- 11 In which example is the organism defending itself?
- A A fox smells food.
  - B An owl sees a mouse.
  - C A bee lands on a colorful flower.
  - D A skunk produces an odor.

- 17 The diagram below shows the changing appearance of an object in space as viewed by an observer in New York State.



- The diagram shows the changing appearance of
- A the Moon as it revolves around Earth
  - B Earth as it revolves around the Moon
  - C the Sun as it revolves around Earth
  - D Earth as it revolves around the Sun
- 18 Which process causes a wet towel to become dry?
- A condensation
  - B evaporation
  - C precipitation
  - D deposition
- 19 Hard, light-colored, and smooth are observations that describe a
- A glass marble
  - B rain cloud
  - C cat's fur
  - D cotton ball
- 20 A student drops a button and a nickel, and they both fall to the floor. What causes both of these items to fall to the floor?
- A magnetism
  - B electricity
  - C sound
  - D gravity

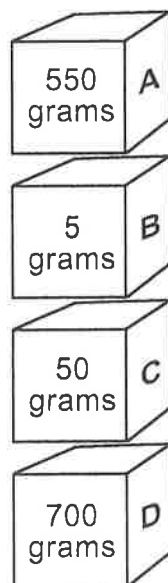
24 Which color of shirt would absorb the most sunlight?

- A white
- B yellow
- C pink
- D black

25 Which statement best describes how energy can be *harmful*?

- A A fire burns down a house.
- B Electricity heats an oven.
- C A lamp lights a house.
- D An alarm clock wakes up a sleeping person.

26 The diagram below shows four boxes labeled *A*, *B*, *C*, and *D*. The mass of each box is shown.



Which box is **under** the box with a mass of 50 grams?

- A box A
- B box B
- C box C
- D box D

**30** A student is writing a report about a famous scientist and author, and records the following information.

1. Rachel Carson was born in 1907.
2. She went to school in Pennsylvania.
3. She is the author of the most important book about the environment ever written.
4. Rachel Carson was 11 years old when her first story appeared in a magazine.

Which piece of information is an opinion?

- A 1
- B 2
- C 3
- D 4

\*\*\*\*\*

32 Students in a class take turns measuring the mass of the classroom pet bird. Each student fills out a record card for the bird’s mass in grams (g). These record cards are shown below.

Date: 9/29

Mass of bird: 20 g

Date: 9/15

Mass of bird: 15 g

Date: 9/22

Mass of bird: 15 g

Date: 9/8

Mass of bird: 10 g

Organize the data from the record cards to show how the mass of the bird changed over time, and enter them in the table below. The data in the first column are shown. [1]

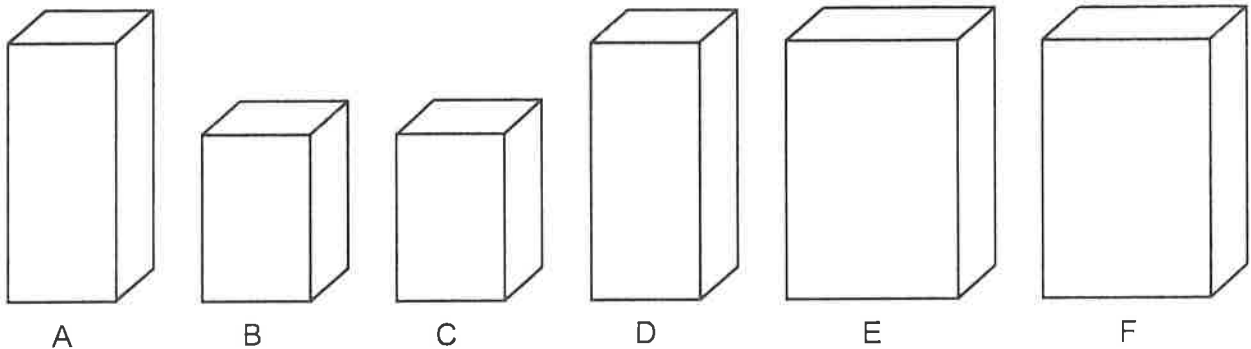
|                  |     |  |  |  |
|------------------|-----|--|--|--|
| Date             | 9/8 |  |  |  |
| Mass of bird (g) | 10  |  |  |  |

- 35** Give **one** reason why eating a balanced diet is important for good health in humans. [1]

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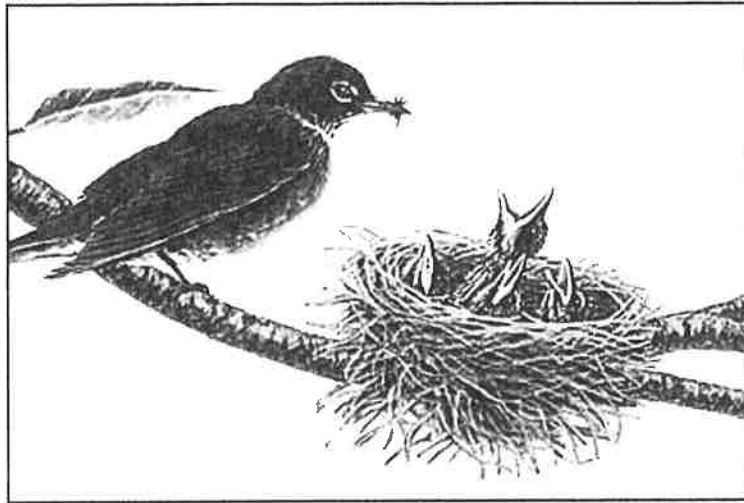
- 36** The diagram below shows six boxes, labeled A through F.



Sort the boxes into two groups according to their height (how tall they are) by placing the letter of each box in the correct column of the chart below. [1]

| Short | Tall |
|-------|------|
|       |      |

**39** The diagram below shows some birds with their nest.



Each spring, many birds spend time looking for the best places to build their nests. Describe **one** reason why this is an important task for the birds. [1]

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**40** In large cities, people are beginning to plant vegetable gardens on the roofs of their apartment buildings. Explain how these gardens may be helpful to the people living in these areas. [1]

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- 41 Explain why student 1 can **not** see her shadow, even though student 2 can see her shadow. [1]

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- 42 Describe **one** way student 2's body might respond if she continued to stay in this sunny location. [1]

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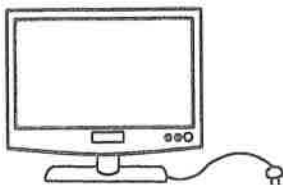
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\*\*\*\*\*

- 45 The diagrams below show three objects that use the same type of energy: a drill, a television, and a lamp.



Drill



Television



Lamp

(Not drawn to scale)

Identify the main form of energy used by all three objects. [1]

\_\_\_\_\_ **energy**

\*\*\*\*\*

Now read Sample Question **S-2**. Mark your answer on the answer sheet in the box showing the row of answer circles for Sample Question **S-2**.

**S-2** Which animal has wings?

- A bird
- B frog
- C mouse
- D rabbit

The correct answer is **bird**, which is next to letter **A**. On your answer sheet, you should have filled in circle **A**.

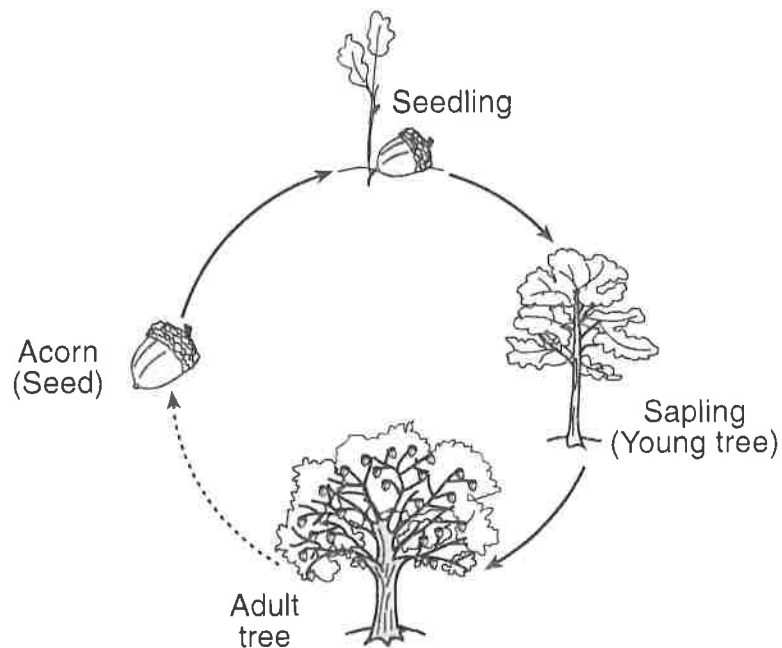
Answer all 30 questions on Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some of the questions, but do the best you can on each one.

When you have finished Part I, go on to Part II. Answer all of the questions in Part II in the space for each question.

4 When the food supply in an area **decreases**, many of the deer living there will

- A move to a new habitat
- B change their color
- C hibernate
- D reproduce

5 The diagram below shows the growth and development of an oak tree.

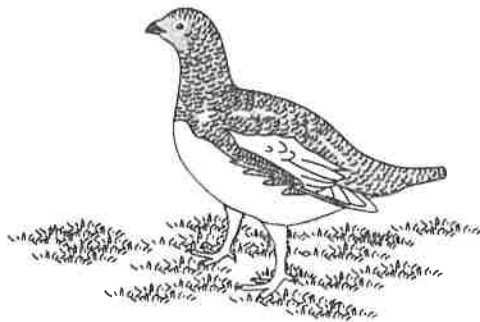


(Not drawn to scale)

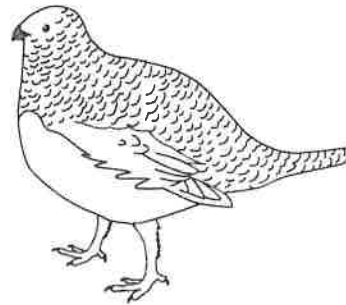
This diagram shows a

- A life span
- B life cycle
- C food chain
- D food supply

10 The diagram below shows the same arctic bird in summer and winter.



Arctic bird in summer



Arctic bird in winter

Which observation of the bird in winter provides the best evidence that the bird is storing fat?

- A It has fewer feathers.
- B It changes color.
- C It is bigger.
- D It has a longer neck.

**Note that question 11 has only three choices.**

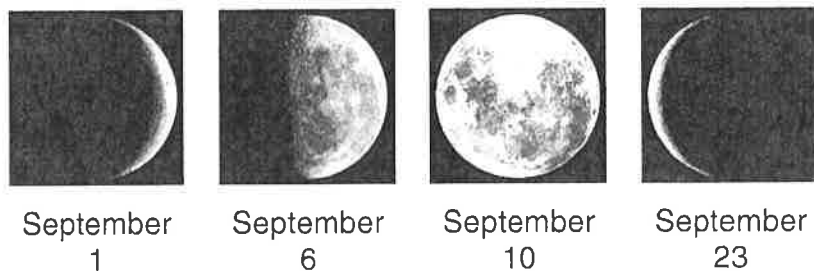
11 Frogs eat crickets. If the population of crickets in an area *decreases*, the number of frogs in the area will most likely

- A decrease
- B increase
- C remain the same

12 What provides the source of energy for the water cycle?

- A rain
- B soil
- C the Sun
- D the Moon

- 16 The diagram below shows the appearance of an object in the sky that was observed from Earth during the month of September.



The object being observed was most likely

- A the Sun
  - B the Moon
  - C a star
  - D a planet
- 17 The map below shows some weather conditions occurring at different locations in the United States on a certain day.



Which two conditions shown on the map are forms of precipitation?

- A cloudy and partly sunny
- B snow and partly sunny
- C snow and rain
- D cloudy and rain

**23** The photograph below shows a waterfall.



Which two processes are occurring when rock particles are carried over the cliff by the waterfall and then settle in another area?

- A evaporation and condensation
- B deposition and evaporation
- C condensation and erosion
- D erosion and deposition

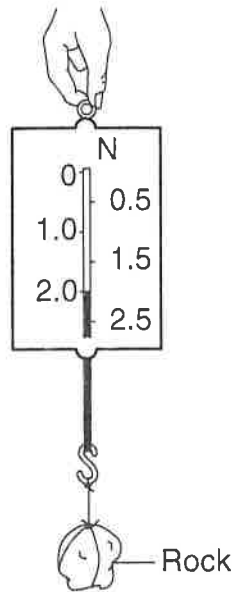
**24** Which unit should be used when a student uses a metric ruler to measure the length of a desk?

- A degree Celsius ( $^{\circ}\text{C}$ )
- B gram (g)
- C milliliter (mL)
- D centimeter (cm)

**25** A student rubs her hands together. Her hands will feel warmer due to heat produced by

- A erosion
- B friction
- C gravity
- D sunlight

**29** The diagram below shows a spring scale.



(Not drawn to scale)

The spring scale is being used to measure the rock's

- A temperature
- B weight
- C length
- D volume

**30** Which statement about frogs is an example of an opinion?

- A Frogs lay eggs.
- B Frogs live in all 50 states.
- C Frogs are very unusual animals.
- D There are over 4,000 kinds of frogs.

\*\*\*\*\*



Base your answers to questions 32 and 33 on the data table below and on your knowledge of science. The data table shows the times of sunrise and sunset in Albany, New York, for four days in a row. The time of sunset for day 5, the next day, is **not** shown.

**Sunrise and Sunset Times for  
Five Days in Albany, New York**

| Day | Sunrise   | Sunset    |
|-----|-----------|-----------|
| 1   | 5:48 a.m. | 8:15 p.m. |
| 2   | 5:49 a.m. | 8:14 p.m. |
| 3   | 5:50 a.m. | 8:13 p.m. |
| 4   | 5:51 a.m. | 8:12 p.m. |
| 5   | 5:52 a.m. |           |

**32** How much earlier was sunrise on day 1 than on day 4? [1]

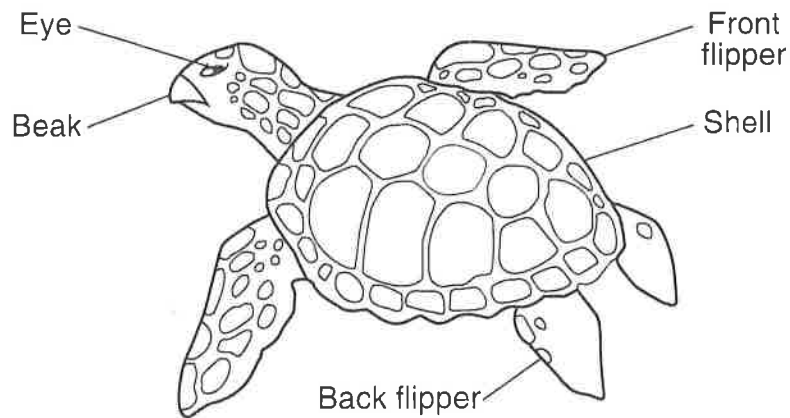
\_\_\_\_\_ **minutes**

**33** Based on the pattern in the data table, predict the time of sunset on day 5. [1]

\_\_\_\_\_ **p.m.**

\*\*\*\*\*

- 36** Animals have different body structures and adaptations that help them grow and survive. The diagram below shows a sea turtle with five body structures labeled.



The chart below lists the functions of these body structures. Complete the chart by placing each labeled body structure next to the function it performs. The body structure that is used to dig a hole for eggs is shown. [1]

| Function               | Body Structure  |
|------------------------|-----------------|
| to dig a hole for eggs | back flipper(s) |
| to see predators       |                 |
| to eat and drink       |                 |
| to swim in water       |                 |

**39** Identify **two** activities that promote good health in humans. [1]

(1) \_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

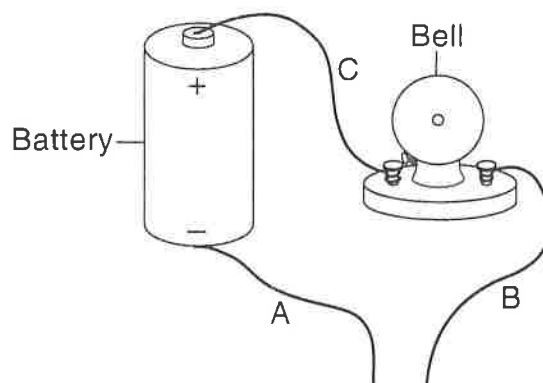
**40** A student observes that a rock has the following characteristics:

black  
no odor  
round  
smooth

The chart below lists three senses that people can use to make observations of objects. Complete the chart by identifying **one** characteristic of the rock that was observed by using each sense listed. [1]

| Sense | Characteristic Observed by<br>Using This Sense |
|-------|--|
| sight |  |
| smell |  |
| touch |  |

- 43 The diagram below shows part of an electrical circuit that includes a battery, a bell, and three wires labeled *A*, *B*, and *C*.



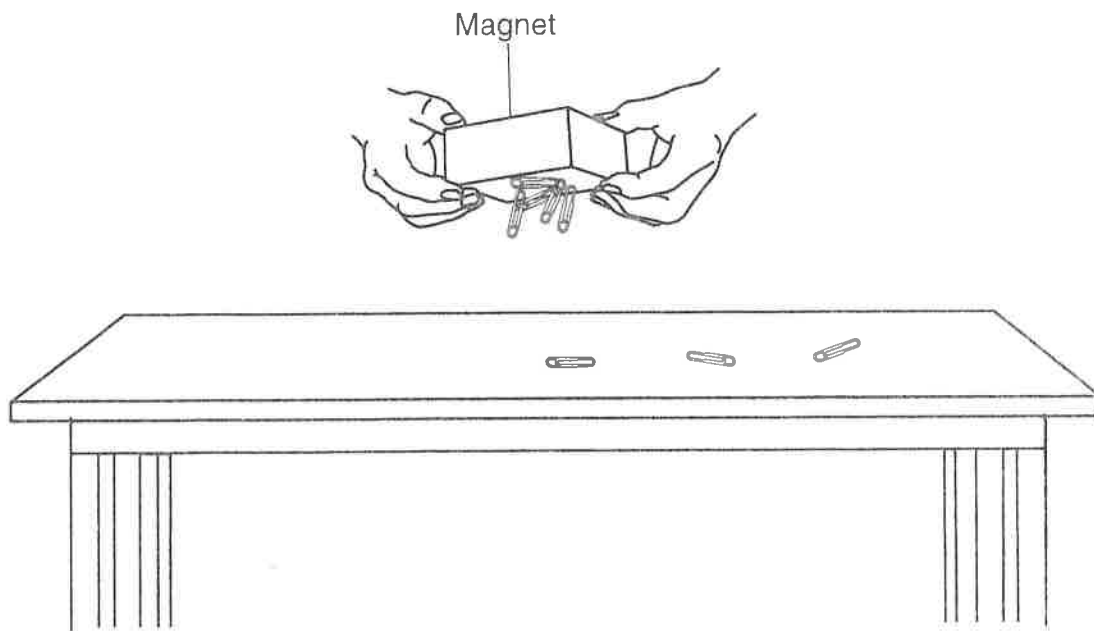
The bell does **not** make a sound. Explain what needs to be done to the circuit so that the bell will make a sound. [1]

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45 The diagram below shows a magnet picking up paper clips from a table.



Give **one** reason why the magnet was able to pick up only **some** of the paper clips on the table. [1]

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# PE Resources for Students

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## **Strike a Yoga Pose (or two)**

"Yoga with Adriene" is a free YouTube channel with thousands of video's to choose from. Her yoga isn't especially technical, instead, her videos are more about learning to use yoga techniques like breathing and self-belief to help relieve stress. She's funny, kind and encouraging. In just 6 years she has recruited over 4 million followers from around the globe of all ages and abilities. Below are some of my favorites!

11 minute Wake up Yoga

Yoga for Complete Beginner

Yoga to Feel your Best

Yoga for Bedtime

30 Days of Yoga



## **Give Running a Try!**

Running is an activity that improves both mental and physical health. Just 30 minutes of running three times a week is linked to weight loss and improved sleep. Ease into a routine by alternating jogging and walking intervals. Find a friend and see if you can complete this jogging/walking workout together.

**WARMUP-** Brisk walk for 5 minutes

Jog- 1 minute

Walk- 1 minute 30 seconds

Jog- 1 minute

Walk- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 second

Jog- 1 minute

Walking- 1 minute 30 second

Jog- 1 minute

Walking- 1 minute 30 second

**COOLDOWN-** Brisk walk for 5 minutes

For more workouts like this download the C25K app. It will help you train for and complete your first 5K in just 9 weeks! For more information and inspiration check out this websites:

[Running for Beginners](#)



## Walk it Out!

Walking improves fitness, cardiac health, alleviates symptoms of depression, improves mood and the list goes on! Find a friend or family and get out to enjoy some fresh spring air. Here is a cool website that helps you log your daily steps/miles:

[Hike Across America](#)



## Teach a PE Class

Gather up some friends, neighbors, or family and teach them some of the games we play in class. Below are some of the games that I like to play with my own children and their friends and cousins.

- *Sea, Shell, Shore*
- *Simon Says*
- *Head Shoulder Cone (you can use a ball or toy in place of a cone)*
- *Spiders and Flies*
- *Fire and Ice*
- *In the Water, On the Sand*
- *Geronimo*
- *Switch! (use unfolded napkins or tissue paper in place of scarves)*

## Get Creative!

Make up your own game that you can teach to your class as a warm-up activity.



Name \_\_\_\_\_  
Tuesday, March 10



Social S.

Date \_\_\_\_\_

## Is a Solid as Solid as a Rock?

By Erin Horner

Matter is everywhere! Matter is anything that takes up space and has mass, or weight. A solid is one kind of matter. Solid matter has its own shape. If it is placed in a container, a solid's shape does not usually change. A book is a solid. If you were to put a book in a bowl, it would still look like a book. If you were to put a book in the bathtub, it might get wet, but it would still look like a book! Some solids are hard. A baseball bat is a hard solid. Some solids are soft. A teddy bear is a soft solid. Some solids are thin. A piece of paper is a thin solid. Some types of matter are solids, but not all solids are as solid as a rock!



Is a Solid as Solid as a Rock?

### Questions

1. What is matter?

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2. The author probably wrote this article to \_\_\_\_\_.

- A. Demonstrate how matter becomes solid
- B. Describe how solids melt
- C. Inform you about solid matter
- D. Persuade you to study solids

3. Which of the following is true about solids?

- A. All solids are soft.
- B. Rocks are solids.
- C. Water is a solid.
- D. All solids are hard.

Name \_\_\_\_\_

Wednesday, March 11



Date \_\_\_\_\_

## Go With The Flow: Liquids

By Erin Horner

Did you know liquid is matter? Actually, matter is all around us. Matter is anything that takes up space and has mass (or weight). There are three types of matter commonly found on Earth. A liquid is one type. A liquid does not have its own shape. It takes the shape of its container. It flows easily.

Milk is a liquid. In a carton, milk takes the shape of the carton. In a cup, milk takes the shape of the cup. When spilled on the floor it takes a new shape-- the shape of a puddle!

Liquids do not always stay liquid. Water is a liquid. If you heat it, it will turn into steam. Steam is a gas. If you freeze water, it will become ice. Ice is a solid. Liquids are an "in between" type of matter. They are the state in-between a solid and a gas.

Liquids change when they are heated or cooled. Liquids can change shape and change states. I guess flowing liquids really do "go with the flow."



Go With The Flow: Liquids

### Questions

1. Where is matter?

---

---

\_\_\_\_ 2. The author probably wrote this article to \_\_\_\_.

- A. Demonstrate how liquids become solids
- B. Describe how solids become gasses
- C. Persuade you to drink more liquids
- D. Inform you about the liquid state of matter

## Gasses

By Erin Horner

Did you know that you are made of matter? It's true. Matter is all around us. Matter is anything that takes up space and has mass, or weight. Your body contains and creates three states of matter. Your arms and legs are examples of solids. They have their own shape. Your blood is an example of a liquid. As it flows through your body it takes the shape of your blood vessels. The air that you inhale is a gas. The carbon dioxide that you exhale is one, too. Gasses are the third state of matter.



It is easy to see a solid. It is easy to see a liquid. It is not always easy, though, to see a gas. A gas does not have its own shape. But it can take on the shape of different containers. If you blow up a round balloon, the air (a gas) will move around and fill it up. If you were to blow up a long and skinny balloon the same thing would happen. This time, though, the air would take on a new shape. It would be long and thin rather than big and round.

Many gasses are invisible. They cannot be seen until they start to change states. When water boils, it becomes a gas called water vapor. When water vapor cools it turns into water. As gasses in the atmosphere cool, they change too. They become clouds.

Matter is all around us. Some, like solids and liquids, are easy to see. Gasses, on the other hand, are hard to see. But they're still matter. And they matter, too! Just like you!

Gasses

## Questions

1. What is the name of gas that you exhale?

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Name \_\_\_\_\_

Friday, March 13



Date \_\_\_\_\_

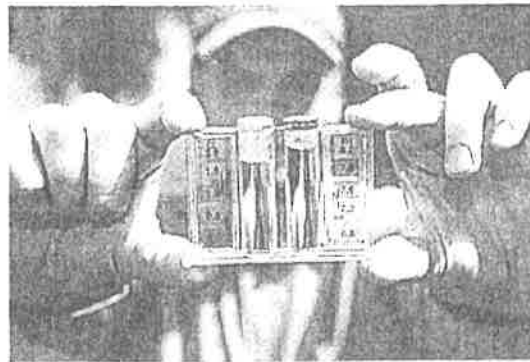
## Chemistry by the Numbers: Acids and Bases

By Cindy Grigg

Rewritten as a short reader by Cindy Grigg

Why do lemons taste sour? Why does soap feel slick? These things happen because of two kinds of chemicals called acids and bases.

Acids are sour chemicals. Some are found in your kitchen. Almost everything that tastes sour has acid in it. Lime and lemon juice are acids. So are grapes, green apples, and sour milk. Grapefruit and many other foods have acids.



Everyone has stomach acid. This acid helps us digest our food. Some acids are used to flavor foods. Acids also help turn milk into cheese. They turn cucumbers into pickles. Many vitamins are acids that our bodies need to grow. Vitamin C is an acid. It helps our bodies fight colds and heal wounds. Without enough Vitamin C, people can get a disease called scurvy.

Bases are bitter chemicals. They are often found in our homes, too. Most bases should not be tasted. Few of them are foods. Many are poisons. Bases have a soapy, slick feel on the skin. Egg whites and ammonia are bases. Milk of magnesia and many drugs and medicines are bases, too. Drain and oven cleaners are very strong bases. They can damage our skin if we touch them. When bases are cooked with fats or oils, they turn into soap.

Water is neither an acid nor a base. It is called a neutral substance. We measure the power of acids and bases with the pH scale. Water is a 7 on the pH scale. Acids have lower numbers than 7. The stronger the acid, the lower its number.

Bases have higher numbers than 7. The higher the number, the more basic the substance is. To find out if something is an acid or a base, we use a pH test strip. This special paper has a chemical on it. You dip the paper into the liquid you want to test. The paper will change color to show if it is an acid or a base. You may have seen pool water being tested with a pH strip. If the strip turns a darker color, the liquid is an acid. If the strip turns a lighter color, then it is a base. You compare the strip to a color chart to find out the pH of the liquid you tested.

Name \_\_\_\_\_  
Friday, March 13



edHelper.

Date \_\_\_\_\_

\_\_\_\_ 8. A number lower than 7 on the pH scale is \_\_\_\_\_.

- A. A base
- B. An acid

Name \_\_\_\_\_  
Monday, March 16



Date \_\_\_\_\_

What Is Air?

## Questions

1. What is air?

---

---

2. What is atmosphere?

---

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\_\_\_\_\_ 3. Which of these things is true about air?

- A. Air takes up space and has weight.
- B. We must have air to stay alive.
- C. Moving air causes weather.
- D. all of the above

\_\_\_\_\_ 4. Which kind of gas in our air do we need to stay alive?

- A. nitrogen
- B. oxygen
- C. all of the above

\_\_\_\_\_ 5. Every tiny little \_\_\_\_\_ in your body needs air.

- A. hair
- B. blood vessel
- C. cell

Name \_\_\_\_\_  
Tuesday, March 10



Date \_\_\_\_\_

## Where Do Seeds Come From?

By Cindy Grigg

Plants make seeds. If a plant makes flowers or fruit, it also makes seeds. In the spring, plants grow. In summer, plants make seeds.

Seeds are very useful to people. Seeds make new plants. People get many foods from plants. People plant seeds in their gardens. New plants grow from the seeds. People eat many kinds of seeds. Beans and corn are two kinds of seeds that we eat.

Popcorn is a seed, too. When popcorn is heated, it explodes! Wheat and rice are seeds that people use to make breads and cereals. Coffee seeds (called coffee beans) are used to make coffee, a drink that many people enjoy.

People also use seeds to feed to animals. Cow feed has wheat seeds in it. Sunflower seeds make a good snack for people and for birds.

Even giant trees grow from tiny seeds. People use trees for wood to build homes. We use wood to make paper and many other things. Without seeds, new trees wouldn't grow. Tree nuts are really seeds. People and animals eat nuts. Squirrels eat seeds from oak trees. We call oak tree seeds acorns.

Seeds can be as big as your head (coconuts). Seeds can be as small as a grain of sand (lettuce). People plant seeds to grow food. Seeds need sunlight and water so they can grow. New plants grow and make more seeds.



Where Do Seeds Come From?

## Questions

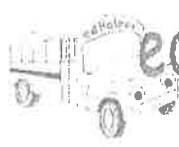
\_\_\_\_\_ 1. Seeds are \_\_\_\_\_ people.

- A. useless to
- B. useful to
- C. bad for

\_\_\_\_\_ 2. Where do seeds come from?

- A. Seeds come from plants.
- B. Seeds come from sunlight.
- C. Seeds come from animals.

Name \_\_\_\_\_  
Monday, March 16



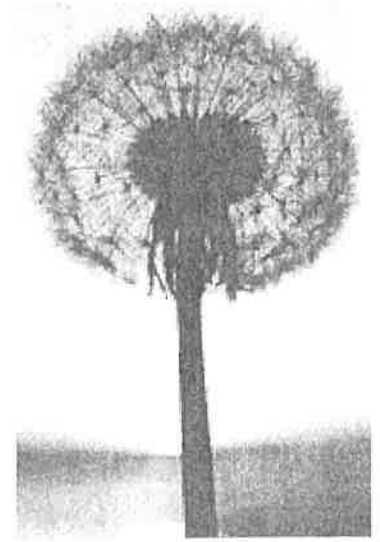
edHelper.

Date \_\_\_\_\_

## Up, Up, and Away!

By Colleen Messina

I am called a weed, but some people think I am pretty anyway. My bright flowers spread across green lawns like yellow polka dots. I have roots that reach deep down into the ground. Some people do not like me to grow in their grass, so they pull me. Some people like to eat my leaves. They add me to salads. Part of my name is the same as a big African cat. I grow quickly, but after a short time, I become an "air head." My yellow flowers turn into fluffy white balls. Poof! The fluff goes up, up, and away. It is carried by a gentle breeze that takes my seeds to new places. See you next year!



Up, Up, and Away!

## Questions

- \_\_\_\_\_ 1. The yellow flowers of this plant spread across a lawn and look like which of the following?
- A. polka dots
  - B. beads
  - C. berries
  - D. none of the above
- \_\_\_\_\_ 2. Where is one place this plant grows, according to this passage?
- A. mountains
  - B. deserts
  - C. rainforests
  - D. lawns
- \_\_\_\_\_ 3. These plants are known as weeds.
- A. false
  - B. true
4. What type of plant is described in this passage?
- \_\_\_\_\_
- \_\_\_\_\_



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

Grade 5 - Directions: Please complete the following New York State Science Tests as a review of materials taught throughout the year and previous years.

Thank you!

Mrs. Forgione & Ms. Pitaro



Now read Sample Question **S-2**. Mark your answer on the answer sheet in the box showing the row of answer circles for Sample Question **S-2**.

**S-2** Which animal has wings?

- A bird
- B frog
- C mouse
- D rabbit

The correct answer is **bird**, which is next to letter **A**. On your answer sheet, you should have filled in circle **A**.

Answer all 30 questions on Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some of the questions, but do the best you can on each one.

When you have finished Part I, go on to Part II. Answer all of the questions in Part II in the space for each question.

3 A basic need of both plants and animals is

- A soil
- B light
- C shelter
- D water

4 An example of an inherited trait is

- A riding a bicycle
- B having a broken arm
- C having brown eyes
- D living in New York State

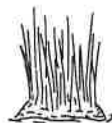
5 The diagram below shows a mature parent plant.



Which young plant is most likely the offspring of this mature parent plant?



A



B

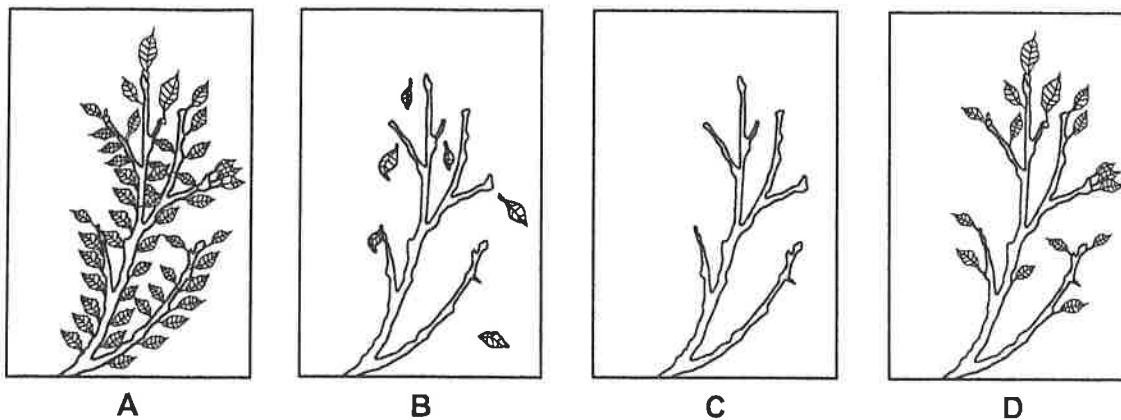


C



D

- 9 The diagrams below show the same branch from a tree in New York State during each of the four seasons.



If students took a field trip during January, which diagram would most likely represent what the branches on most trees would look like in New York State?

- A A
- B B
- C C
- D D

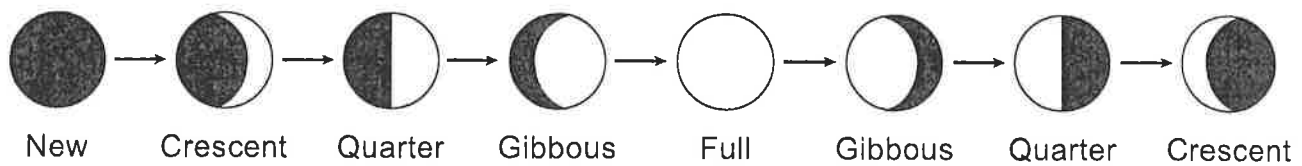
- 10 As the length of daylight shortens and the temperatures cool, geese and some other birds fly south from New York State. This behavioral change is known as

- A communicating
- B hunting
- C migration
- D hibernation

- 11 In which example is the organism defending itself?

- A A fox smells food.
- B An owl sees a mouse.
- C A bee lands on a colorful flower.
- D A skunk produces an odor.

- 17 The diagram below shows the changing appearance of an object in space as viewed by an observer in New York State.



The diagram shows the changing appearance of

- A the Moon as it revolves around Earth
  - B Earth as it revolves around the Moon
  - C the Sun as it revolves around Earth
  - D Earth as it revolves around the Sun
- 18 Which process causes a wet towel to become dry?
- A condensation
  - B evaporation
  - C precipitation
  - D deposition
- 19 Hard, light-colored, and smooth are observations that describe a
- A glass marble
  - B rain cloud
  - C cat's fur
  - D cotton ball
- 20 A student drops a button and a nickel, and they both fall to the floor. What causes both of these items to fall to the floor?
- A magnetism
  - B electricity
  - C sound
  - D gravity

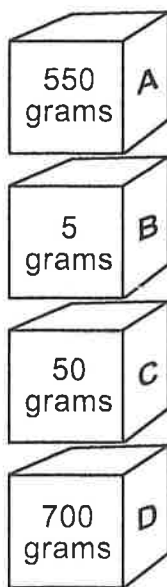
24 Which color of shirt would absorb the most sunlight?

- A white
- B yellow
- C pink
- D black

25 Which statement best describes how energy can be *harmful*?

- A A fire burns down a house.
- B Electricity heats an oven.
- C A lamp lights a house.
- D An alarm clock wakes up a sleeping person.

26 The diagram below shows four boxes labeled *A*, *B*, *C*, and *D*. The mass of each box is shown.



Which box is **under** the box with a mass of 50 grams?

- A box *A*
- B box *B*
- C box *C*
- D box *D*

**30** A student is writing a report about a famous scientist and author, and records the following information.

1. Rachel Carson was born in 1907.
2. She went to school in Pennsylvania.
3. She is the author of the most important book about the environment ever written.
4. Rachel Carson was 11 years old when her first story appeared in a magazine.

Which piece of information is an opinion?

- A 1
- B 2
- C 3
- D 4

\*\*\*\*\*

- 32** Students in a class take turns measuring the mass of the classroom pet bird. Each student fills out a record card for the bird's mass in grams (g). These record cards are shown below.

|                    |
|--------------------|
| Date: 9/29         |
| Mass of bird: 20 g |

|                    |
|--------------------|
| Date: 9/15         |
| Mass of bird: 15 g |

|                    |
|--------------------|
| Date: 9/22         |
| Mass of bird: 15 g |

|                    |
|--------------------|
| Date: 9/8          |
| Mass of bird: 10 g |

Organize the data from the record cards to show how the mass of the bird changed over time, and enter them in the table below. The data in the first column are shown. [1]

|                  |     |  |  |  |
|------------------|-----|--|--|--|
| Date             | 9/8 |  |  |  |
| Mass of bird (g) | 10  |  |  |  |

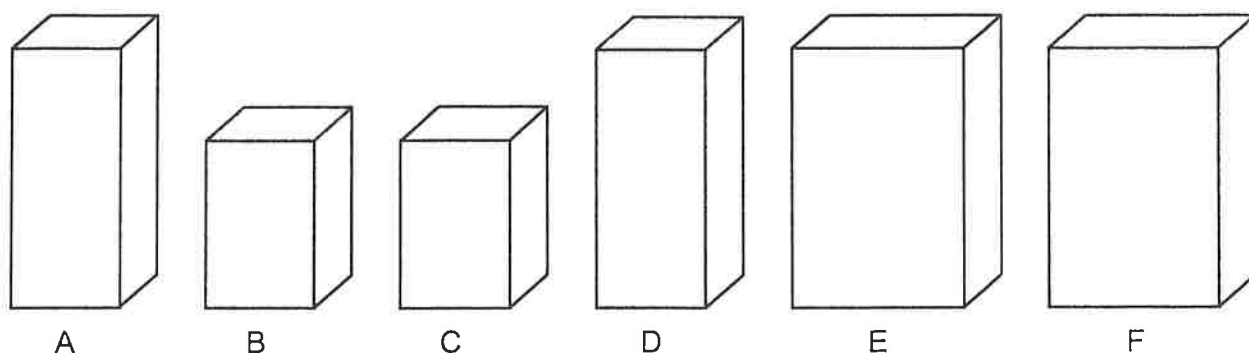


**35** Give **one** reason why eating a balanced diet is important for good health in humans. [1]

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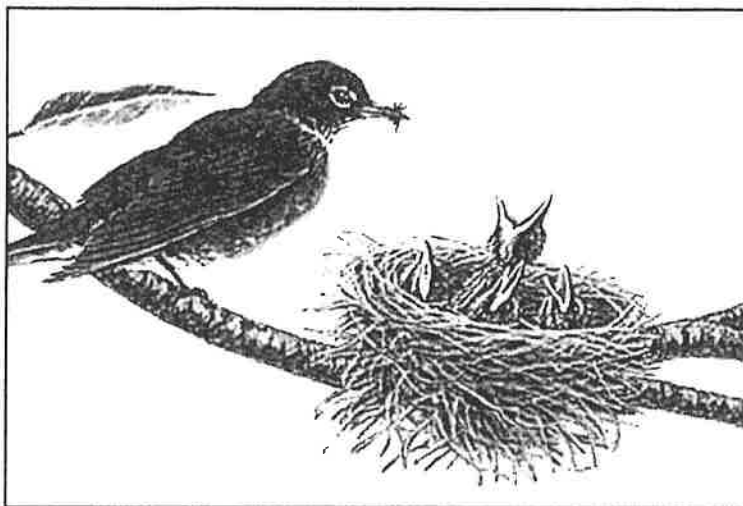
**36** The diagram below shows six boxes, labeled *A* through *F*.



Sort the boxes into two groups according to their height (how tall they are) by placing the letter of each box in the correct column of the chart below. [1]

| Short | Tall |
|-------|------|
|       |      |

**39** The diagram below shows some birds with their nest.



Each spring, many birds spend time looking for the best places to build their nests. Describe **one** reason why this is an important task for the birds. [1]

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**40** In large cities, people are beginning to plant vegetable gardens on the roofs of their apartment buildings. Explain how these gardens may be helpful to the people living in these areas. [1]

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41 Explain why student 1 can **not** see her shadow, even though student 2 can see her shadow. [1]

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42 Describe **one** way student 2's body might respond if she continued to stay in this sunny location. [1]

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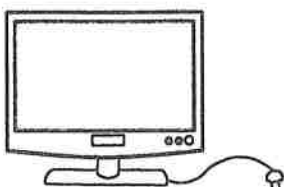
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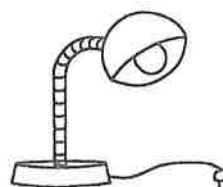
- 45 The diagrams below show three objects that use the same type of energy: a drill, a television, and a lamp.



Drill



Television



Lamp

(Not drawn to scale)

Identify the main form of energy used by all three objects. [1]

\_\_\_\_\_ energy

\*\*\*\*\*

Now read Sample Question **S-2**. Mark your answer on the answer sheet in the box showing the row of answer circles for Sample Question **S-2**.

**S-2** Which animal has wings?

- A bird
- B frog
- C mouse
- D rabbit

The correct answer is **bird**, which is next to letter **A**. On your answer sheet, you should have filled in circle **A**.

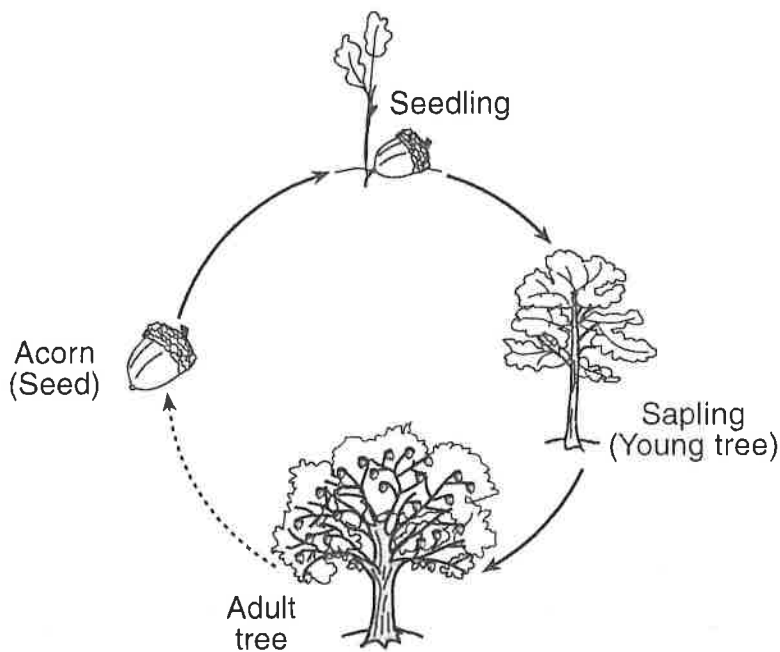
Answer all 30 questions on Part I of this test. Fill in only one circle for each question. Be sure to erase completely any answer you want to change. You may not know the answers to some of the questions, but do the best you can on each one.

When you have finished Part I, go on to Part II. Answer all of the questions in Part II in the space for each question.

4 When the food supply in an area **decreases**, many of the deer living there will

- A move to a new habitat
- B change their color
- C hibernate
- D reproduce

5 The diagram below shows the growth and development of an oak tree.

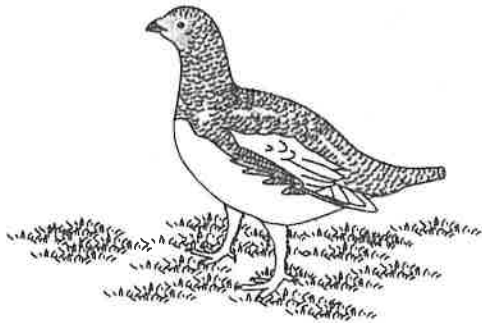


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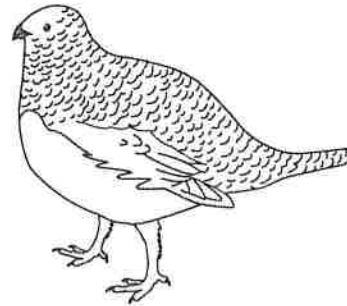
This diagram shows a

- A life span
- B life cycle
- C food chain
- D food supply

- 10 The diagram below shows the same arctic bird in summer and winter.



Arctic bird in summer



Arctic bird in winter

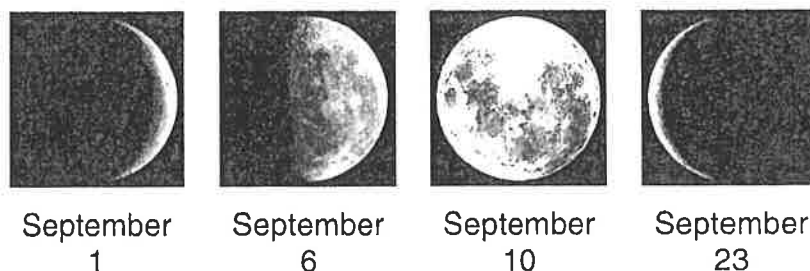
Which observation of the bird in winter provides the best evidence that the bird is storing fat?

- A It has fewer feathers.
- B It changes color.
- C It is bigger.
- D It has a longer neck.

**Note that question 11 has only three choices.**

- 11 Frogs eat crickets. If the population of crickets in an area ***decreases***, the number of frogs in the area will most likely
- A decrease
  - B increase
  - C remain the same
- 12 What provides the source of energy for the water cycle?
- A rain
  - B soil
  - C the Sun
  - D the Moon

- 16 The diagram below shows the appearance of an object in the sky that was observed from Earth during the month of September.



The object being observed was most likely

- A the Sun
  - B the Moon
  - C a star
  - D a planet
- 17 The map below shows some weather conditions occurring at different locations in the United States on a certain day.



Which two conditions shown on the map are forms of precipitation?

- A cloudy and partly sunny
- B snow and partly sunny
- C snow and rain
- D cloudy and rain



**23** The photograph below shows a waterfall.



Which two processes are occurring when rock particles are carried over the cliff by the waterfall and then settle in another area?

- A evaporation and condensation
- B deposition and evaporation
- C condensation and erosion
- D erosion and deposition

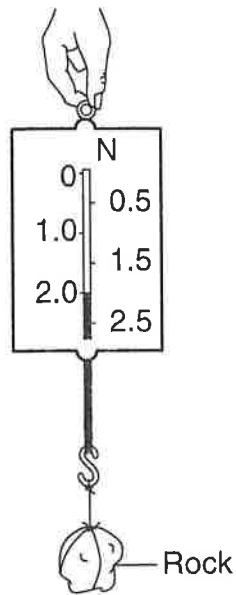
**24** Which unit should be used when a student uses a metric ruler to measure the length of a desk?

- A degree Celsius ( $^{\circ}\text{C}$ )
- B gram (g)
- C milliliter (mL)
- D centimeter (cm)

**25** A student rubs her hands together. Her hands will feel warmer due to heat produced by

- A erosion
- B friction
- C gravity
- D sunlight

29 The diagram below shows a spring scale.



(Not drawn to scale)

The spring scale is being used to measure the rock's

- A temperature
- B weight
- C length
- D volume

30 Which statement about frogs is an example of an opinion?

- A Frogs lay eggs.
- B Frogs live in all 50 states.
- C Frogs are very unusual animals.
- D There are over 4,000 kinds of frogs.

\*\*\*\*\*

Base your answers to questions 32 and 33 on the data table below and on your knowledge of science. The data table shows the times of sunrise and sunset in Albany, New York, for four days in a row. The time of sunset for day 5, the next day, is **not** shown.

**Sunrise and Sunset Times for  
Five Days in Albany, New York**

| Day | Sunrise   | Sunset    |
|-----|-----------|-----------|
| 1   | 5:48 a.m. | 8:15 p.m. |
| 2   | 5:49 a.m. | 8:14 p.m. |
| 3   | 5:50 a.m. | 8:13 p.m. |
| 4   | 5:51 a.m. | 8:12 p.m. |
| 5   | 5:52 a.m. |           |

**32** How much earlier was sunrise on day 1 than on day 4? [1]

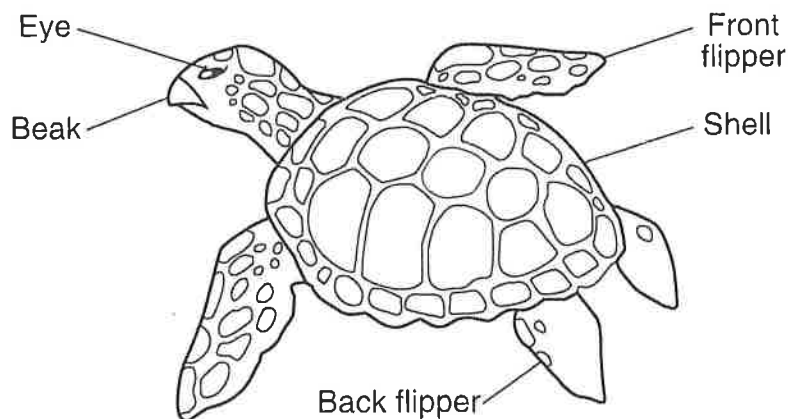
\_\_\_\_\_ **minutes**

**33** Based on the pattern in the data table, predict the time of sunset on day 5. [1]

\_\_\_\_\_ **p.m.**

\*\*\*\*\*

- 36** Animals have different body structures and adaptations that help them grow and survive. The diagram below shows a sea turtle with five body structures labeled.



The chart below lists the functions of these body structures. Complete the chart by placing each labeled body structure next to the function it performs. The body structure that is used to dig a hole for eggs is shown. [1]

| Function               | Body Structure  |
|------------------------|-----------------|
| to dig a hole for eggs | back flipper(s) |
| to see predators       |                 |
| to eat and drink       |                 |
| to swim in water       |                 |

**39** Identify **two** activities that promote good health in humans. [1]

(1) \_\_\_\_\_

\_\_\_\_\_

(2) \_\_\_\_\_

\_\_\_\_\_

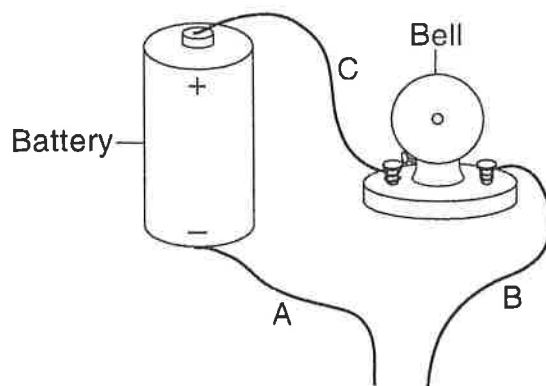
**40** A student observes that a rock has the following characteristics:

black  
no odor  
round  
smooth

The chart below lists three senses that people can use to make observations of objects. Complete the chart by identifying **one** characteristic of the rock that was observed by using each sense listed. [1]

| Sense | Characteristic Observed by<br>Using This Sense |
|-------|--|
| sight |  |
| smell |  |
| touch |  |

- 43 The diagram below shows part of an electrical circuit that includes a battery, a bell, and three wires labeled A, B, and C.



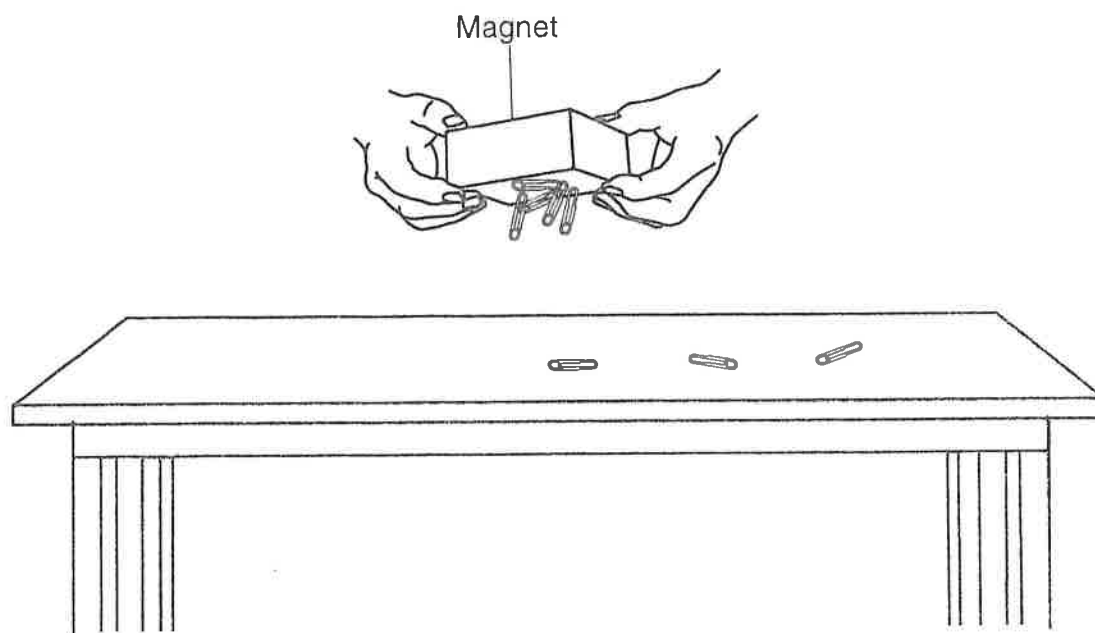
The bell does **not** make a sound. Explain what needs to be done to the circuit so that the bell will make a sound. [1]

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45 The diagram below shows a magnet picking up paper clips from a table.



Give **one** reason why the magnet was able to pick up only **some** of the paper clips on the table. [1]

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\*\*\*\*\*



Solve each of the problems.

Answers

|    |     |    |       |   |
|----|-----|----|-------|---|
| 30 | 560 | 20 | 7     | 5 |
| 6  | 96  | 8  | 11 r2 | 4 |
| 76 | 8   | 12 | 13    | 4 |

1)  $(70 \div 10) - 2 =$  \_\_\_\_\_

2)  $(6 + 10) \times 6 =$  \_\_\_\_\_

3)  $(16 - 15) \times 4 =$  \_\_\_\_\_

4)  $(9 \times 10) \div 8 =$  \_\_\_\_\_

5)  $(1 + 5) + 2 =$  \_\_\_\_\_

6)  $(35 \div 7) \times 6 =$  \_\_\_\_\_

7)  $(8 \times 9) + 4 =$  \_\_\_\_\_

8)  $(10 \times 9) - 82 =$  \_\_\_\_\_

9)  $(7 \times 8) \times 10 =$  \_\_\_\_\_

10)  $(15 - 4) - 4 =$  \_\_\_\_\_

11)  $(13 - 1) + 1 =$  \_\_\_\_\_

12)  $(20 \div 2) + 10 =$  \_\_\_\_\_

13)  $(40 - 4) \div 6 =$  \_\_\_\_\_

14)  $(3 + 5) \div 2 =$  \_\_\_\_\_

15)  $(9 + 6) - 3 =$  \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_



**Rewrite each number sentence using numerals and symbols.**

## Answers

- 1) Find  $\frac{1}{7}$  of 1 less than 16  
 $7 \div (1 - 16)$   
 $(7 - 16) \div 1$   
 $(16 - 1) \div 7$   
 $7 \div (16 - 1)$
- 2) 8 divided by the sum of 9 and 3  
 $(9 + 3) \div 8$   
 $8 \div (9 + 3)$   
 $(9 + 8) \div 3$   
 $3 \div (9 + 8)$
- 3) Find the quotient of 2 divided by 9 and then multiply 6  
 $2 \times (6 \div 9)$   
 $6 \times (2 \div 9)$   
 $(6 \div 9) \times 2$   
 $9 \times (2 \div 6)$
- 4) Divide 22 by the difference between 18 and 7  
 $7 \div (18 - 22)$   
 $22 \div (18 - 7)$   
 $(18 - 7) \div 22$   
 $(7 - 18) \div 22$
- 5) Multiply 9 by the product of 4 and 9  
 $(4 \times 9) \times 9$   
 $9 \times (4 \times 9)$   
 $(9 \times 9) \times 4$   
 $4 \times (9 \times 9)$
- 6) Find 2 times as much as 4 less than 6  
 $2 \times (6 - 4)$   
 $2 \times (4 - 6)$   
 $(6 - 2) \times 4$   
 $(4 - 6) \times 2$
- 7) Take the quotient of 3 divided by 7 from 9  
 $(3 \div 7) - 9$   
 $9 - (3 \div 7)$   
 $9 - (7 \div 3)$   
 $(7 - 3) \div 9$
- 8) Find the product of 6 and 5 and then take that from 8  
 $8 - (6 \times 5)$   
 $(6 \times 5) - 8$   
 $(5 \times 6) - 8$   
 $8 \times (6 - 5)$
- 9) Find the quotient of 9 divided by 3 and then divide 7  
 $7 \div (9 \div 3)$   
 $(3 \div 9) \div 7$   
 $(9 \div 3) \div 7$   
 $7 \div (3 \div 9)$
- 10) Subtract 5 from 5 and then add 8  
 $8 + (5 - 5)$   
 $8 + (5 - 5)$   
 $5 + (8 - 5)$   
 $5 + (5 - 8)$
- 11) Find  $\frac{1}{9}$  as many as 2 plus 5  
 $(2 + 5) \div 9$   
 $2 \div (9 + 5)$   
 $(9 + 5) \div 2$   
 $9 \div (5 + 2)$
- 12) Find the quotient of 2 divided by 5 and then add 4  
 $(4 \div 5) + 2$   
 $2 + (4 \div 5)$   
 $4 + (2 \div 5)$   
 $(2 \div 4) + 5$

1.

2.

3.

4.

5.

6. \_\_\_\_\_

7. \_\_\_\_\_

8.

9. \_\_\_\_\_

10. \_\_\_\_\_

11.

12.



## Build a 6-digit number (with decimals)

### Grade 5 Place Value Worksheet

Example:  $1,836.21 = 1,000 + 800 + 30 + 6 + 0.2 + 0.01$

Write the 6-digit numbers

1. \_\_\_\_\_  $500,000 + 10,000 + 6,000 + 300$

2. \_\_\_\_\_  $6,000 + 400 + 70 + 9 + 0.6 + 0.08$

3. \_\_\_\_\_  $500,000 + 30,000 + 5,000 + 100 + 60 + 3$

4. \_\_\_\_\_  $9,000 + 500 + 70 + 8 + 0.4 + 0.03$

5. \_\_\_\_\_  $9,000 + 500 + 70 + 5 + 0.4 + 0.08$

6. \_\_\_\_\_  $10,000 + 8,000 + 200 + 80 + 2 + 0.2$

7. \_\_\_\_\_  $40,000 + 9,000 + 500 + 4 + 0.5$

8. \_\_\_\_\_  $300 + 6 + 0.5 + 0.09 + 0.009$

9. \_\_\_\_\_  $700 + 50 + 3 + 0.8 + 0.04 + 0.003$

10. \_\_\_\_\_  $700 + 90 + 8 + 0.6 + 0.01 + 0.007$

Name \_\_\_\_\_



Date \_\_\_\_\_

# Multiplication Table

Fill in the empty spaces to complete the multiplication table.

| x  | 1  | 2  | 3 | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12  |
|----|----|----|---|----|----|----|----|----|----|----|----|-----|
| 1  | 1  |    |   |    |    |    |    | 8  |    |    |    | 12  |
| 2  |    |    |   | 8  | 10 |    |    |    |    |    | 22 |     |
| 3  | 3  |    |   | 12 |    | 18 | 21 |    |    | 30 |    |     |
| 4  |    |    |   |    | 20 |    |    | 32 |    |    |    | 48  |
| 5  | 5  |    |   |    |    |    |    | 40 |    |    |    |     |
| 6  |    |    |   |    | 30 |    | 42 | 48 | 54 |    | 66 | 72  |
| 7  |    |    |   |    | 35 |    |    |    |    |    |    |     |
| 8  |    |    |   |    |    | 48 |    |    | 72 | 80 | 88 | 96  |
| 9  | 9  | 18 |   |    | 45 |    | 63 |    | 81 |    |    | 108 |
| 10 | 10 |    |   |    |    | 60 |    | 80 |    |    |    |     |
| 11 |    | 22 |   | 44 |    |    |    | 88 |    |    |    | 132 |
| 12 | 12 |    |   |    |    |    |    | 96 |    |    |    |     |

Name \_\_\_\_\_



edHelper.com

Date \_\_\_\_\_

## Multiplication

Complete.

|                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. $9,170 \times 3$  | 2. $190 \times 1$    | 3. $7,551 \times 5$  |
| 4. $9,786 \times 2$  | 5. $212 \times 6$    | 6. $399 \times 6$    |
| 7. $1,840 \times 3$  | 8. $814 \times 1$    | 9. $9,869 \times 8$  |
| 10. $413 \times 9$   | 11. $5,160 \times 6$ | 12. $863 \times 8$   |
| 13. $8,971 \times 1$ | 14. $504 \times 9$   | 15. $188 \times 8$   |
| 16. $2,030 \times 4$ | 17. $1,326 \times 7$ | 18. $936 \times 6$   |
| 19. $662 \times 9$   | 20. $5,938 \times 9$ | 21. $834 \times 8$   |
| 22. $6,951 \times 1$ | 23. $802 \times 3$   | 24. $4,797 \times 8$ |
| 25. $1,495 \times 2$ | 26. $414 \times 8$   | 27. $6,842 \times 4$ |
| 28. $109 \times 9$   | 29. $809 \times 5$   | 30. $9,901 \times 1$ |

- 1 In which number does the 7 have a value that is  $\frac{1}{10}$  of the value of the 7 in 17,582?

(A) 26,719      (C) 61,827  
(B) 30,475      (D) 73,096

- 2 The table below shows the number of hours some forest animals sleep each week.

**Hours Slept  
per Week**

| Animal   | Number of Hours |
|----------|-----------------|
| squirrel | 105             |
| fox      | 70              |
| rabbit   | 56              |

If there are 52 weeks in a year, how many more hours does a squirrel sleep in a year than a rabbit?

(A) 2,912 hours      (C) 2,548 hours  
(B) 2,648 hours      (D) 1,820 hours

- 3 What is the value of the missing exponent in the equation  $4 \times 10^{\square} = 400,000$ ?

(A) 6      (C) 4  
(B) 5      (D) 3

- 4 The positions of the 6 and the 8 are switched in 6,841 to create a new number. What is the value of the 8 in the new number?

(A) 8      (C) 800  
(B) 80      (D) 8,000

- 5 Select all the expressions that have a product equal to 24,000.

(A)  $24 \times 100$   
(B)  $24 \times 10^3$   
(C)  $300 \times 80$   
(D)  $3,000 \times 8$   
(E)  $3 \times 8 \times 10^2$

Multiply.

6  $9,042 \times 6 =$  \_\_\_\_\_ 7  $178 \times 54 =$  \_\_\_\_\_ 8  $37,803 \times 29 =$  \_\_\_\_\_

- 9 Place an X in the table to show whether each equation is true or false.

|                                   | True | False |
|-----------------------------------|------|-------|
| $500 \times 10^4 = 50,000$        |      |       |
| $5,000 \times 10^2 = 500,000$     |      |       |
| $50,000 \times 10^3 = 50,000,000$ |      |       |

- 10 Fill in the blanks.

$$7,500 \times \frac{1}{10} = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times 10 = 750,000$$

- 11 Devonte collected 83 coins playing his favorite video game. Each coin was worth 12 points. How many points did Devonte score?
- \_\_\_\_\_

- 12 A company ordered 30 cases of paper. Each case had 9,000 sheets of paper in it. How many sheets of paper did the company order?
- \_\_\_\_\_

- 13 Ashley bought 7 packages of stickers. There were 168 stickers in each package. How many stickers did Ashley buy?
- \_\_\_\_\_

- 14 The Mariana Trench in the Pacific Ocean is about 36,000 feet deep. What is this depth written as a whole number multiplied by a power of 10?
- \_\_\_\_\_

- 15 The air distance between Chicago and Miami is 1,197 miles. A pilot flies this route 36 times in a month.

**Part A**

How many miles does the pilot fly between Chicago and Miami in a month?

\_\_\_\_\_

**Part B**

Write an equation to model the solution to the problem.

\_\_\_\_\_

## Add and Subtract Fractions

### Use What You Know

In Grade 4, you learned that adding and subtracting fractions is similar to adding and subtracting whole numbers. Take a look at this problem.

Emiliano needs  $\frac{1}{2}$  stick of butter to make corn bread. He also needs  $\frac{1}{4}$  stick of butter to make apple muffins. How many sticks of butter does he need?

$\frac{1}{2}$  stick of butter



$\frac{1}{4}$  stick of butter



a. Does Emiliano need more than 1 stick of butter or less than 1 stick of butter for the corn bread and the apple muffins? \_\_\_\_\_

b. How do you know? \_\_\_\_\_

c. Do  $\frac{1}{2}$  and  $\frac{1}{4}$  have like denominators? \_\_\_\_\_

d. How do you find equivalent fractions? \_\_\_\_\_

e. 4 is a multiple of both 2 and 4. Write an equivalent fraction for  $\frac{1}{2}$  using fourths.

$$\frac{1}{2} = \frac{\boxed{\phantom{00}}}{4}$$

f. You now have fractions that have same-size parts. How many fourths of a stick of butter does Emiliano need?

$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}} + \frac{1}{4} = \underline{\hspace{2cm}}$ . So he needs \_\_\_\_\_ stick of butter.

## Find Out More

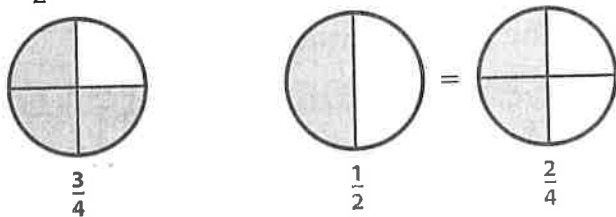
To add fractions, the size of the parts that make up the whole must be the same.

Because  $\frac{1}{2}$  and  $\frac{1}{4}$  use different-size parts, you rewrote  $\frac{1}{2}$  as the equivalent fraction  $\frac{2}{4}$ .

Since  $\frac{1}{4}$  and  $\frac{2}{4}$  both use fourths, you combined  $\frac{2}{4}$  and  $\frac{1}{4}$  to get the sum  $\frac{3}{4}$ .

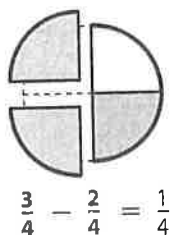
The same idea works for subtracting fractions. Here is a similar problem:  $\frac{3}{4} - \frac{1}{2}$ .

Write  $\frac{1}{2}$  as the equivalent fraction  $\frac{2}{4}$ .



To subtract  $\frac{2}{4}$  from  $\frac{3}{4}$ , you can take 2 shaded parts away from the 3 shaded parts.

You have 1 shaded part left.



Before adding or subtracting fractions, the fractions must be built from the same-size part of a whole. This means the fractions must have the same denominator, or a **common denominator**.

## Reflect

- 1 Write a multiplication equation that shows how the denominators of  $\frac{3}{4}$  and  $\frac{1}{2}$  are related. Explain how this equation helps you write  $\frac{1}{2}$  as an equivalent fraction with a denominator of 4.

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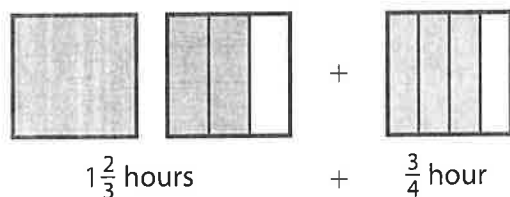
# Learn About Adding Fractions with Unlike Denominators

Read the problem below. Then explore different ways to add fractions with unlike denominators.

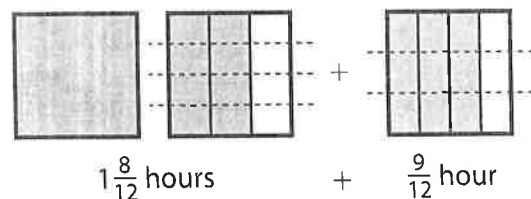
Jenna spent  $1\frac{2}{3}$  hours mowing the back yard. After taking a break, she spent  $\frac{3}{4}$  hour mowing the front yard. How much time did she spend mowing the whole yard?

**Picture It** You can picture the fractions in the problem using models.

The shaded parts represent time spent on the back yard,  $1\frac{2}{3}$  hours, and the front yard,  $\frac{3}{4}$  hour.

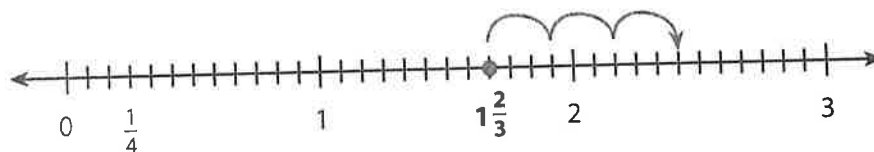


The sections need to be divided into same-size parts to add. Use dashed lines to divide the fraction models into 12 equal parts. This works because 12 is a multiple of both 3 and 4.



**Model It** You can use a number line to add fractions.

The number line is divided into twelfths with a point at  $1\frac{2}{3}$ .



$$\frac{1}{4} = \frac{3}{12}, \text{ so } \frac{3}{4} = \frac{3}{12} + \frac{3}{12} + \frac{3}{12}.$$

$$\frac{3}{12} + \frac{3}{12} + \frac{3}{12} = \frac{9}{12}$$

Start at  $1\frac{2}{3}$  and jump right  $\frac{9}{12}$ .

▶ **Connect It** Now you will solve the problem from the previous page using equivalent fractions and addition.

- 2 Are  $1\frac{2}{3}$  and  $\frac{3}{4}$  made up of same-size parts? Justify your answer.

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- 3 Look at the models on the previous page. What is a common denominator of  $1\frac{2}{3}$  and  $\frac{3}{4}$ ? \_\_\_\_\_

- 4 You can find this common denominator without a model. Write a multiplication equation that shows how the denominators 3 and 4 are related to 12.

---

- 5 Use this common denominator to find equivalent fractions for  $1\frac{2}{3}$  and  $\frac{3}{4}$ .

$$1\frac{2}{3} = 1 \frac{\quad}{\quad} \qquad \frac{3}{4} = \frac{\quad}{\quad}$$

- 6 Using the equivalent fractions, what is the sum of  $1\frac{2}{3}$  and  $\frac{3}{4}$ ? \_\_\_\_\_

- 7 Explain how to add two fractions with unlike denominators. \_\_\_\_\_

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▶ **Try It** Use what you just learned about adding fractions with unlike denominators to solve these problems. Show your work on a separate sheet of paper.

- 8 What is  $1\frac{1}{6} + 2\frac{3}{8}$ ? \_\_\_\_\_

- 9 Hank practices  $\frac{2}{5}$  of the words on his spelling list on Monday. He practices another  $\frac{1}{2}$  of his list on Tuesday. How much of his spelling list has Hank practiced so far? \_\_\_\_\_

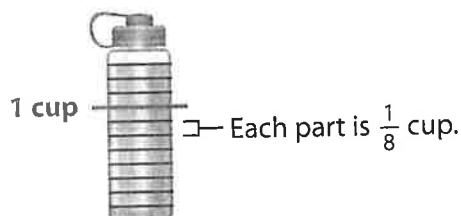
# Learn About Subtracting Fractions with Unlike Denominators

Read the problem below. Then explore different ways to subtract fractions with unlike denominators.

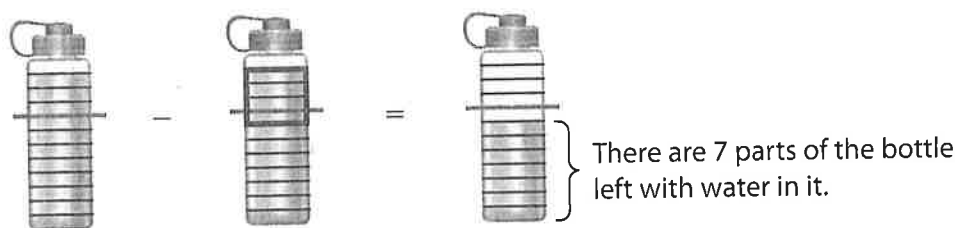
Gavin's water bottle has  $1\frac{3}{8}$  cups of water. He drinks  $\frac{1}{2}$  cup. How much water is left in the bottle?

**Picture It** You can use a picture to model subtracting fractions.

The water bottle is shaded to show that it has  $1\text{ cup} + \frac{3}{8}\text{ cup}$  of water in it. 1 cup is equivalent to  $\frac{8}{8}$  cup. The bottle has 11 eighths shaded.

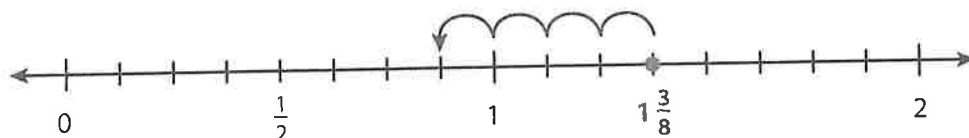


Gavin drinks  $\frac{1}{2}$  cup, or  $\frac{4}{8}$  cup. So take away 4 shaded parts of the bottle to show how much is left.



**Model It** You can use a number line to model subtracting fractions.

The number line below is divided into  $\frac{1}{8}$ s with a point at  $1\frac{3}{8}$ .



$\frac{1}{2}$  is equivalent to  $\frac{4}{8}$ .  $\frac{4}{8}$  is four  $\frac{1}{8}$  units on the number line. Start at  $1\frac{3}{8}$  and jump left  $\frac{4}{8}$ .

**Connect It** Now you will solve the problem from the previous page using equivalent fractions and a subtraction equation.

13 Estimate the amount of water left in Gavin's bottle. \_\_\_\_\_  
How did you get your estimate? \_\_\_\_\_

14 Look at *Picture It* and *Model It* on the previous page. Why is  $\frac{1}{2}$  rewritten as  $\frac{4}{8}$ ?  
\_\_\_\_\_  
\_\_\_\_\_

15 Use the number line on the previous page to rewrite  $1\frac{3}{8}$  as a fraction greater than 1. Then use it to write a subtraction equation with equivalent fractions.  
\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

16 Why was it helpful to rewrite  $1\frac{3}{8}$  as a fraction greater than 1? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

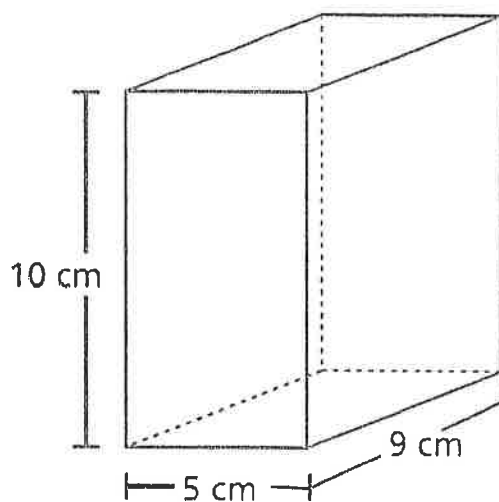
17 Explain how to subtract two fractions with unlike denominators. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Try It** Use what you just learned about subtracting fractions with unlike denominators to solve these problems. Show your work on a separate sheet of paper.

15 What is  $\frac{7}{8} - \frac{1}{2}$ ? \_\_\_\_\_

16 Emily's living room window is  $2\frac{5}{6}$  feet wide. The window in her bedroom is  $1\frac{1}{3}$  feet wide. How much wider is the living room window than her bedroom window? \_\_\_\_\_

- 1 A gift box is in the shape of a right rectangular prism, as pictured below.



What is the volume, in cubic centimeters, of the gift box?

- A 24
- B 45
- C 225
- D 450
- 2 What is the sum of  $\frac{2}{10} + \frac{6}{100}$ ?

- A  $\frac{8}{10}$
- B  $\frac{8}{100}$
- C  $\frac{26}{10}$
- D  $\frac{26}{100}$

**GO ON**

- 3 On Saturday, Mark sold  $2\frac{7}{8}$  gallons of lemonade. On the same day, Regan sold  $\frac{2}{3}$  as much lemonade as Mark. How much lemonade, in gallons, did Regan sell?

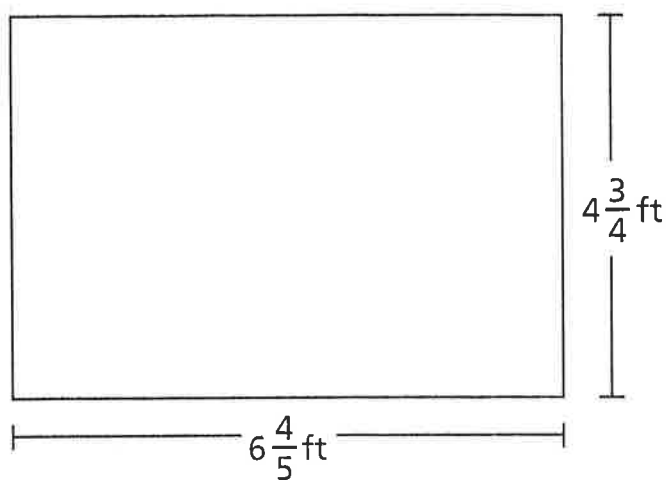
- A  $1\frac{5}{16}$   
B  $1\frac{11}{12}$   
C  $2\frac{7}{12}$   
D  $4\frac{5}{16}$

- 4 Which point on the number line below represents a value of 0.75?



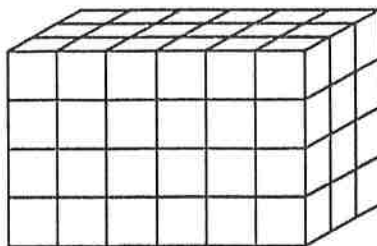
- A point A  
B point B  
C point C  
D point D

- 13 What is the area, in square feet, of the rectangle shown below?



- A  $11\frac{11}{20}$   
B  $24\frac{12}{20}$   
C  $27\frac{4}{20}$   
D  $32\frac{6}{20}$

- 18 Which expression **cannot** be used to determine the volume of the rectangular prism pictured below?



- A  $12 \times 6$
- B  $18 \times 4$
- C  $6 \times 3 \times 4$
- D  $6 \times 4 \times 6$
- 19 What is 15.74 rounded to the nearest whole number?

- A 10
- B 15
- C 16
- D 20



- 20 Jack puts  $\frac{1}{3}$  pound of birdseed into his bird feeder every time he fills it. How many times can Jack fill his bird feeder with 4 pounds of birdseed?

A  $1\frac{1}{3}$

B  $3\frac{2}{3}$

C 11

D 12

- 21 Carlos makes 1 pound of snack mix using nuts, raisins, and cereal. The list below shows how many pounds of nuts and raisins he uses.

- $\frac{1}{3}$  pound of nuts
- $\frac{2}{5}$  pound of raisins

How much cereal, in pounds, does Carlos use?

A  $\frac{3}{8}$

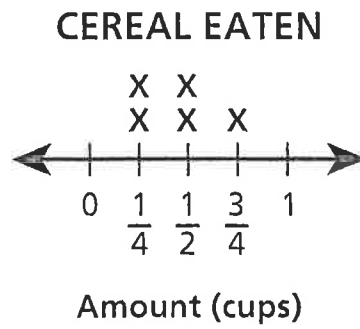
B  $\frac{5}{8}$

C  $\frac{4}{15}$

D  $\frac{11}{15}$

- 26 What is the value of the expression  $\frac{1}{7} \div 5$ ?
- A  $\frac{1}{12}$
- B  $\frac{1}{35}$
- C  $\frac{5}{7}$
- D  $\frac{6}{7}$
- 27 Cole has a rectangular garden with an area of 16.02 square meters. The length of the garden is 4.5 meters. What is the width, in meters, of the garden?
- A 3.56
- B 11.52
- C 16.12
- D 20.52
- 28 A school raised a total of \$1,648 to purchase new books. The money raised will be shared equally among 8 different classrooms. What is the total amount of money each classroom will receive?
- A \$206
- B \$207
- C \$260
- D \$270

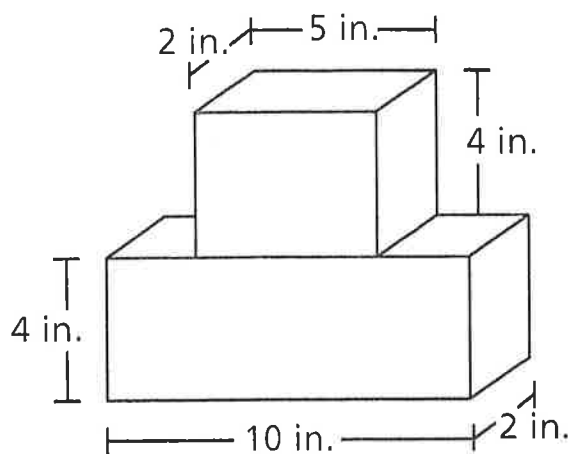
- 29 The line plot below shows the amount of cereal Shyanne ate in 5 days.



What is the total number of cups of cereal that Shyanne ate in the 5 days?

- A  $1\frac{1}{2}$
- B  $1\frac{3}{4}$
- C  $1\frac{4}{6}$
- D  $2\frac{1}{4}$

- 30 Lana used the two blocks pictured in the diagram to build a tower.



**LANA'S TOWER**

What is the total volume, in cubic inches, of the tower Lana built?

- A 27
- B 80
- C 116
- D 120

**STOP**

31 Which statement about rectangles and rhombuses is always true?

- A Both figures are squares.
- B Both figures are quadrilaterals.
- C Both figures have four right angles.
- D Both figures have four congruent sides.

32 What is the value of the expression  $\frac{2}{5} + \frac{3}{7}$ ?

- A  $\frac{5}{35}$
- B  $\frac{6}{35}$
- C  $\frac{5}{12}$
- D  $\frac{29}{35}$

33 Which measurement is equivalent to 4,000 centimeters?

- A 4 meters
- B 40 meters
- C 400 meters
- D 40,000 meters

**GO ON**

- 34 Zaire is making granola bars. For one batch of bars, the recipe requires  $1\frac{2}{3}$  cups of rolled oats, and  $\frac{1}{2}$  cup raisins. What is the combined amount, in cups, of rolled oats and raisins that is used in one batch of granola bars?

- A  $1\frac{1}{5}$
- B  $1\frac{3}{5}$
- C  $2\frac{1}{3}$
- D  $2\frac{1}{6}$

- 35 In a science class, Paula made a mixture by adding 2.05 milliliters of hydrogen peroxide and 6.15 milliliters of water together. Equal amounts of the whole mixture were poured into 5 empty containers. How much of the mixture, in milliliters, did she pour into each container?

- A 0.61
- B 1.64
- C 3.2
- D 13.4

- 36 What is 482.073 expressed in word form?

- A four eighty-two and seventy-three thousandths
- B four hundred eighty-two thousand seventy-three
- C four hundred eighty-two and seventy-three hundredths
- D four hundred eighty-two and seventy-three thousandths

- 37 Marco bakes cookies for his class. He uses  $\frac{3}{4}$  cup of butter in each batch of cookies and bakes  $2\frac{1}{2}$  batches. Which equation can be used to determine the number of cups of butter Marco uses to bake cookies?

A  $\frac{5}{2} \times \frac{3}{4} = 1\frac{7}{8}$

B  $\frac{3}{2} \times \frac{3}{4} = 1\frac{1}{8}$

C  $\frac{5}{2} \times \frac{4}{3} = 3\frac{1}{3}$

D  $\frac{3}{2} \times \frac{4}{3} = 2$

- 38 Which expression is **not** equivalent to  $\frac{2}{3} \times 4$ ?

A  $(2 \times 4) \div 3$

B  $\frac{1}{3} \times (2 \times 4)$

C  $\left(4 \times \frac{1}{3}\right) \times 2$

D  $\left(2 \times \frac{1}{3}\right) + \left(4 \times \frac{1}{3}\right)$

39

Martin is using unit cubes to build a tower in the shape of a right rectangular prism. A description of the tower is listed below.

- bottom layer is made of 16 unit cubes
- bottom layer is in the shape of a square prism
- 9 more equal layers of unit cubes are added on top of the bottom layer

What is the total volume, in cubic units, of the completed tower?

*Show your work.*

*Answer* \_\_\_\_\_ cubic units

**GO ON**



- 40 Joel has a goal to practice his clarinet for  $4\frac{1}{2}$  hours per week. The list below shows the number of hours Joel has practiced so far this week.

- Monday:  $1\frac{1}{2}$  hours
- Wednesday:  $1\frac{1}{4}$  hours
- Thursday: 1 hour

How many more hours does Joel need to practice this week to meet his goal?

*Show your work.*

*Answer* \_\_\_\_\_ hours

**GO ON**

- 41 How does the value of the digit 2 in the number 32,000 compare with the value of the digit 2 in the number 26,000?

*Explain your answer.*

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- 42 There are 5 cups of oatmeal in a container. Stella eats  $\frac{1}{3}$  cup of the oatmeal every day for breakfast. In how many days will Stella finish all the oatmeal in the container?

*Show your work.*

*Answer* \_\_\_\_\_ days

**GO ON**

- 43 Olga decorates blankets with ribbon. She has 12 yards of ribbon. She uses 22 feet of the ribbon to decorate blankets. After she decorates the blankets, how many feet of ribbon remain?

*Show your work.*

*Answer* \_\_\_\_\_ feet

**GO ON**

- 44 In the expression  $5 \times \frac{y}{7}$ , what value of  $y$  would make a product greater than 5?

***Explain your answer.***

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***GO ON***

- 45 Diane has pizza dough for making pizzas. She separates the dough into the three portions listed below.

- Portion A is 8.25 ounces.
- Portion B is twice as much as portion A.
- Portion C is twice as much as portion B.

What is the weight, in ounces, of portion B and the weight, in ounces, of portion C?

*Show your work.*

**Answer** Portion B \_\_\_\_\_ ounces

Portion C \_\_\_\_\_ ounces

**STOP**

# PE Resources for Students

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## **Strike a Yoga Pose (or two)**

"Yoga with Adriene" is a free YouTube channel with thousands of video's to choose from. Her yoga isn't especially technical, instead, her videos are more about learning to use yoga techniques like breathing and self-belief to help relieve stress. She's funny, kind and encouraging. In just 6 years she has recruited over 4 million followers from around the globe of all ages and abilities. Below are some of my favorites!

11 minute Wake up Yoga

Yoga for Complete Beginner

Yoga to Feel your Best

Yoga for Bedtime

30 Days of Yoga



## **Give Running a Try!**

Running is an activity that improves both mental and physical health. Just 30 minutes of running three times a week is linked to weight loss and improved sleep. Ease into a routine by alternating jogging and walking intervals. Find a friend and see if you can complete this jogging/walking workout together.

**WARMUP-** Brisk walk for 5 minutes

Jog- 1 minute

Walk- 1 minute 30 seconds

Jog- 1 minute

Walk- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 seconds

Jog- 1 minute

Walking- 1 minute 30 second

Jog- 1 minute

Walking- 1 minute 30 second

Jog- 1 minute

Walking- 1 minute 30 second

**COOLDOWN-** Brisk walk for 5 minutes

For more workouts like this download the C25K app. It will help you train for and complete your first 5K in just 9 weeks! For more information and inspiration check out this websites:

[Running for Beginners](#)





## Walk it Out!

Walking improves fitness, cardiac health, alleviates symptoms of depression, improves mood and the list goes on! Find a friend or family and get out to enjoy some fresh spring air. Here is a cool website that helps you log your daily steps/miles:

[Hike Across America](#)



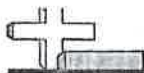
## Teach a PE Class

Gather up some friends, neighbors, or family and teach them some of the games we play in class. Below are some of the games that I like to play with my own children and their friends and cousins.

- *Sea, Shell, Shore*
- *Simon Says*
- *Head Shoulder Cone (you can use a ball or toy in place of a cone)*
- *Spiders and Flies*
- *Fire and Ice*
- *In the Water, On the Sand*
- *Geronimo*
- *Switch! (use unfolded napkins or tissue paper in place of scarves)*

## Get Creative!

Make up your own game that you can teach to your class as a warm-up activity.



Solve each of the problems.

Answers

30

560

20

7

5

6

96

8

11 r2

4

76

8

12

13

4

1)  $(70 \div 10) - 2 =$  \_\_\_\_\_

2)  $(6 + 10) \times 6 =$  \_\_\_\_\_

3)  $(16 - 15) \times 4 =$  \_\_\_\_\_

4)  $(9 \times 10) \div 8 =$  \_\_\_\_\_

5)  $(1 + 5) + 2 =$  \_\_\_\_\_

6)  $(35 \div 7) \times 6 =$  \_\_\_\_\_

7)  $(8 \times 9) + 4 =$  \_\_\_\_\_

8)  $(10 \times 9) - 82 =$  \_\_\_\_\_

9)  $(7 \times 8) \times 10 =$  \_\_\_\_\_

10)  $(15 - 4) - 4 =$  \_\_\_\_\_

11)  $(13 - 1) + 1 =$  \_\_\_\_\_

12)  $(20 \div 2) + 10 =$  \_\_\_\_\_

13)  $(40 - 4) \div 6 =$  \_\_\_\_\_

14)  $(3 + 5) \div 2 =$  \_\_\_\_\_

15)  $(9 + 6) - 3 =$  \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_



Rewrite each number sentence using numerals and symbols.

Answers

- 1) Find  $\frac{1}{7}$  of 1 less than 16

$$7 \div (1 - 16)$$

$$(7 - 16) \div 1$$

$$(16 - 1) \div 7$$

$$7 \div (16 - 1)$$

- 2) 8 divided by the sum of 9 and 3

$$(9 + 3) \div 8$$

$$8 \div (9 + 3)$$

$$(9 + 8) \div 3$$

$$3 \div (9 + 8)$$

- 3) Find the quotient of 2 divided by 9 and then multiply 6

$$2 \times (6 \div 9)$$

$$6 \times (2 \div 9)$$

$$(6 \div 9) \times 2$$

$$9 \times (2 \div 6)$$

- 4) Divide 22 by the difference between 18 and 7

$$7 \div (18 - 22)$$

$$22 \div (18 - 7)$$

$$(18 - 7) \div 22$$

$$(7 - 18) \div 22$$

- 5) Multiply 9 by the product of 4 and 9

$$(4 \times 9) \times 9$$

$$9 \times (4 \times 9)$$

$$(9 \times 9) \times 4$$

$$4 \times (9 \times 9)$$

- 6) Find 2 times as much as 4 less than 6

$$2 \times (6 - 4)$$

$$2 \times (4 - 6)$$

$$(6 - 2) \times 4$$

$$(4 - 6) \times 2$$

- 7) Take the quotient of 3 divided by 7 from 9

$$(3 \div 7) - 9$$

$$9 - (3 \div 7)$$

$$9 - (7 \div 3)$$

$$(7 - 3) \div 9$$

- 8) Find the product of 6 and 5 and then take that from 8

$$8 - (6 \times 5)$$

$$(6 \times 5) - 8$$

$$(5 \times 6) - 8$$

$$8 \times (6 - 5)$$

- 9) Find the quotient of 9 divided by 3 and then divide 7

$$7 \div (9 \div 3)$$

$$(3 \div 9) \div 7$$

$$(9 \div 3) \div 7$$

$$7 \div (3 \div 9)$$

- 10) Subtract 5 from 5 and then add 8

$$8 + (5 - 5)$$

$$8 + (5 - 5)$$

$$5 + (8 - 5)$$

$$5 + (5 - 8)$$

- 11) Find  $\frac{1}{9}$  as many as 2 plus 5

$$(2 + 5) \div 9$$

$$2 \div (9 + 5)$$

$$(9 + 5) \div 2$$

$$9 \div (5 + 2)$$

- 12) Find the quotient of 2 divided by 5 and then add 4

$$(4 \div 5) + 2$$

$$2 + (4 \div 5)$$

$$4 + (2 \div 5)$$

$$(2 \div 4) + 5$$

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_



## Build a 6-digit number (with decimals)

### Grade 5 Place Value Worksheet

Example:  $1,836.21 = 1,000 + 800 + 30 + 6 + 0.2 + 0.01$

Write the 6-digit numbers

1. \_\_\_\_\_  $500,000 + 10,000 + 6,000 + 300$
2. \_\_\_\_\_  $6,000 + 400 + 70 + 9 + 0.6 + 0.08$
3. \_\_\_\_\_  $500,000 + 30,000 + 5,000 + 100 + 60 + 3$
4. \_\_\_\_\_  $9,000 + 500 + 70 + 8 + 0.4 + 0.03$
5. \_\_\_\_\_  $9,000 + 500 + 70 + 5 + 0.4 + 0.08$
6. \_\_\_\_\_  $10,000 + 8,000 + 200 + 80 + 2 + 0.2$
7. \_\_\_\_\_  $40,000 + 9,000 + 500 + 4 + 0.5$
8. \_\_\_\_\_  $300 + 6 + 0.5 + 0.09 + 0.009$
9. \_\_\_\_\_  $700 + 50 + 3 + 0.8 + 0.04 + 0.003$
10. \_\_\_\_\_  $700 + 90 + 8 + 0.6 + 0.01 + 0.007$

Name \_\_\_\_\_



Date \_\_\_\_\_

# Multiplication Table

Fill in the empty spaces to complete the multiplication table.

| x  | 1  | 2  | 3 | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12  |
|----|----|----|---|----|----|----|----|----|----|----|----|-----|
| 1  | 1  |    |   |    |    |    |    | 8  |    |    |    | 12  |
| 2  |    |    |   | 8  | 10 |    |    |    |    |    | 22 |     |
| 3  | 3  |    |   | 12 |    | 18 | 21 |    |    | 30 |    |     |
| 4  |    |    |   |    | 20 |    |    | 32 |    |    |    | 48  |
| 5  | 5  |    |   |    |    |    |    | 40 |    |    |    |     |
| 6  |    |    |   |    | 30 |    | 42 | 48 | 54 |    | 66 | 72  |
| 7  |    |    |   |    | 35 |    |    |    |    |    |    |     |
| 8  |    |    |   |    |    | 48 |    |    | 72 | 80 | 88 | 96  |
| 9  | 9  | 18 |   |    | 45 |    | 63 |    | 81 |    |    | 108 |
| 10 | 10 |    |   |    |    | 60 |    | 80 |    |    |    |     |
| 11 |    | 22 |   | 44 |    |    |    | 88 |    |    |    | 132 |
| 12 | 12 |    |   |    |    |    |    | 96 |    |    |    |     |

Name \_\_\_\_\_



edHelper.com

Date \_\_\_\_\_

## Multiplication

Complete.

|                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. $9,170 \times 3$  | 2. $190 \times 1$    | 3. $7,551 \times 5$  |
| 4. $9,786 \times 2$  | 5. $212 \times 6$    | 6. $399 \times 6$    |
| 7. $1,840 \times 3$  | 8. $814 \times 1$    | 9. $9,869 \times 8$  |
| 10. $413 \times 9$   | 11. $5,160 \times 6$ | 12. $863 \times 8$   |
| 13. $8,971 \times 1$ | 14. $504 \times 9$   | 15. $188 \times 8$   |
| 16. $2,030 \times 4$ | 17. $1,326 \times 7$ | 18. $936 \times 6$   |
| 19. $662 \times 9$   | 20. $5,938 \times 9$ | 21. $834 \times 8$   |
| 22. $6,951 \times 1$ | 23. $802 \times 3$   | 24. $4,797 \times 8$ |
| 25. $1,495 \times 2$ | 26. $414 \times 8$   | 27. $6,842 \times 4$ |
| 28. $109 \times 9$   | 29. $809 \times 5$   | 30. $9,901 \times 1$ |

- 1 In which number does the 7 have a value that is  $\frac{1}{10}$  of the value of the 7 in 17,582?

(A) 26,719      (C) 61,827  
(B) 30,475      (D) 73,096

- 2 The table below shows the number of hours some forest animals sleep each week.

**Hours Slept  
per Week**

| Animal   | Number of Hours |
|----------|-----------------|
| squirrel | 105             |
| fox      | 70              |
| rabbit   | 56              |

If there are 52 weeks in a year, how many more hours does a squirrel sleep in a year than a rabbit?

(A) 2,912 hours      (C) 2,548 hours  
(B) 2,648 hours      (D) 1,820 hours

- 3 What is the value of the missing exponent in the equation  $4 \times 10^{\square} = 400,000$ ?

(A) 6      (C) 4  
(B) 5      (D) 3

- 4 The positions of the 6 and the 8 are switched in 6,841 to create a new number. What is the value of the 8 in the new number?

(A) 8      (C) 800  
(B) 80      (D) 8,000

- 5 Select **all** the expressions that have a product equal to 24,000.

(A)  $24 \times 100$   
(B)  $24 \times 10^3$   
(C)  $300 \times 80$   
(D)  $3,000 \times 8$   
(E)  $3 \times 8 \times 10^2$

Multiply.

6  $9,042 \times 6 =$  \_\_\_\_\_ 7  $178 \times 54 =$  \_\_\_\_\_ 8  $37,803 \times 29 =$  \_\_\_\_\_

- 9 Place an X in the table to show whether each equation is true or false.

|                                   | True | False |
|-----------------------------------|------|-------|
| $500 \times 10^4 = 50,000$        |      |       |
| $5,000 \times 10^2 = 500,000$     |      |       |
| $50,000 \times 10^3 = 50,000,000$ |      |       |

- 10 Fill in the blanks.

$$7,500 \times \frac{1}{10} = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \times 10 = 750,000$$

- 11 Devonte collected 83 coins playing his favorite video game. Each coin was worth 12 points. How many points did Devonte score?
- \_\_\_\_\_

- 12 A company ordered 30 cases of paper. Each case had 9,000 sheets of paper in it. How many sheets of paper did the company order?
- \_\_\_\_\_

- 13 Ashley bought 7 packages of stickers. There were 168 stickers in each package. How many stickers did Ashley buy?
- \_\_\_\_\_

- 14 The Mariana Trench in the Pacific Ocean is about 36,000 feet deep. What is this depth written as a whole number multiplied by a power of 10?
- \_\_\_\_\_

- 15 The air distance between Chicago and Miami is 1,197 miles. A pilot flies this route 36 times in a month.

**Part A**

How many miles does the pilot fly between Chicago and Miami in a month?

\_\_\_\_\_

**Part B**

Write an equation to model the solution to the problem.

\_\_\_\_\_



### Use What You Know

In Grade 4, you learned that adding and subtracting fractions is similar to adding and subtracting whole numbers. Take a look at this problem.

Emiliano needs  $\frac{1}{2}$  stick of butter to make corn bread. He also needs  $\frac{1}{4}$  stick of butter to make apple muffins. How many sticks of butter does he need?

$\frac{1}{2}$  stick of butter



$\frac{1}{4}$  stick of butter



a. Does Emiliano need more than 1 stick of butter or less than 1 stick of butter for the corn bread and the apple muffins? \_\_\_\_\_

b. How do you know? \_\_\_\_\_

c. Do  $\frac{1}{2}$  and  $\frac{1}{4}$  have like denominators? \_\_\_\_\_

d. How do you find equivalent fractions? \_\_\_\_\_

e. 4 is a multiple of both 2 and 4. Write an equivalent fraction for  $\frac{1}{2}$  using fourths.

$$\frac{1}{2} = \frac{\boxed{\phantom{00}}}{4}$$

f. You now have fractions that have same-size parts. How many fourths of a stick of butter does Emiliano need?

$$\frac{1}{2} + \frac{1}{4} = \underline{\hspace{2cm}} + \frac{1}{4} = \underline{\hspace{2cm}}. \text{ So he needs } \underline{\hspace{2cm}} \text{ stick of butter.}$$

## Find Out More

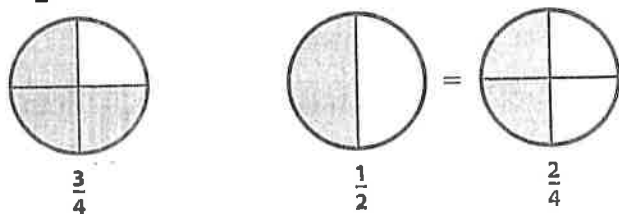
To add fractions, the size of the parts that make up the whole must be the same.

Because  $\frac{1}{2}$  and  $\frac{1}{4}$  use different-size parts, you rewrote  $\frac{1}{2}$  as the equivalent fraction  $\frac{2}{4}$ .

Since  $\frac{1}{4}$  and  $\frac{2}{4}$  both use fourths, you combined  $\frac{2}{4}$  and  $\frac{1}{4}$  to get the sum  $\frac{3}{4}$ .

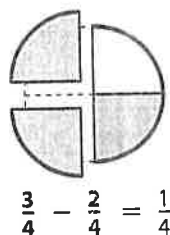
The same idea works for subtracting fractions. Here is a similar problem:  $\frac{3}{4} - \frac{1}{2}$ .

Write  $\frac{1}{2}$  as the equivalent fraction  $\frac{2}{4}$ .



To subtract  $\frac{2}{4}$  from  $\frac{3}{4}$ , you can take 2 shaded parts away from the 3 shaded parts.

You have 1 shaded part left.



Before adding or subtracting fractions, the fractions must be built from the same-size part of a whole. This means the fractions must have the same denominator, or a **common denominator**.

## Reflect

- Write a multiplication equation that shows how the denominators of  $\frac{3}{4}$  and  $\frac{1}{2}$  are related. Explain how this equation helps you write  $\frac{1}{2}$  as an equivalent fraction with a denominator of 4.

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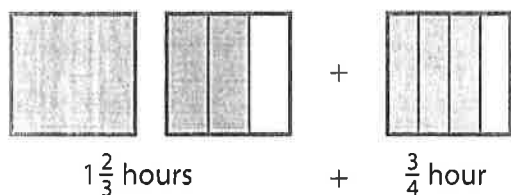
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**Read the problem below. Then explore different ways to add fractions with unlike denominators.**

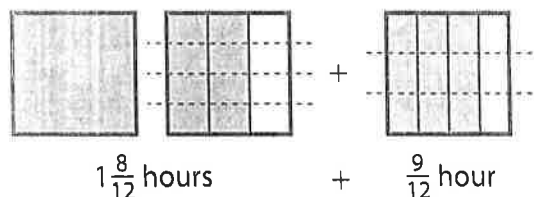
Jenna spent  $1\frac{2}{3}$  hours mowing the back yard. After taking a break, she spent  $\frac{3}{4}$  hour mowing the front yard. How much time did she spend mowing the whole yard?

**Picture It** You can picture the fractions in the problem using models.

The shaded parts represent time spent on the back yard,  $1\frac{2}{3}$  hours, and the front yard,  $\frac{3}{4}$  hour.

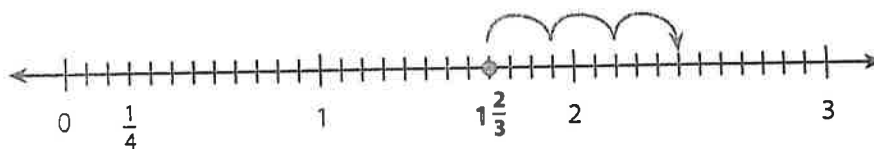


The sections need to be divided into same-size parts to add. Use dashed lines to divide the fraction models into 12 equal parts. This works because 12 is a multiple of both 3 and 4.



**Model It** You can use a number line to add fractions.

The number line is divided into twelfths with a point at  $1\frac{2}{3}$ .



$$\frac{1}{4} = \frac{3}{12}, \text{ so } \frac{3}{4} = \frac{3}{12} + \frac{3}{12} + \frac{3}{12}.$$

$$\frac{3}{12} + \frac{3}{12} + \frac{3}{12} = \frac{9}{12}$$

Start at  $1\frac{2}{3}$  and jump right  $\frac{9}{12}$ .

**Connect It** Now you will solve the problem from the previous page using equivalent fractions and addition.

- 2 Are  $1\frac{2}{3}$  and  $\frac{3}{4}$  made up of same-size parts? Justify your answer.

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- 3 Look at the models on the previous page. What is a common denominator of  $1\frac{2}{3}$  and  $\frac{3}{4}$ ? \_\_\_\_\_

- 4 You can find this common denominator without a model. Write a multiplication equation that shows how the denominators 3 and 4 are related to 12.

---

- 5 Use this common denominator to find equivalent fractions for  $1\frac{2}{3}$  and  $\frac{3}{4}$ .

$$1\frac{2}{3} = 1 \frac{\quad}{\quad} \qquad \frac{3}{4} = \frac{\quad}{\quad}$$

- 6 Using the equivalent fractions, what is the sum of  $1\frac{2}{3}$  and  $\frac{3}{4}$ ? \_\_\_\_\_

- 7 Explain how to add two fractions with unlike denominators. \_\_\_\_\_

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**Try It** Use what you just learned about adding fractions with unlike denominators to solve these problems. Show your work on a separate sheet of paper.

- 8 What is  $1\frac{1}{6} + 2\frac{3}{8}$ ? \_\_\_\_\_

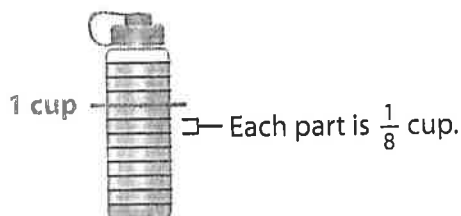
- 9 Hank practices  $\frac{2}{5}$  of the words on his spelling list on Monday. He practices another  $\frac{1}{2}$  of his list on Tuesday. How much of his spelling list has Hank practiced so far? \_\_\_\_\_

Read the problem below. Then explore different ways to subtract fractions with unlike denominators.

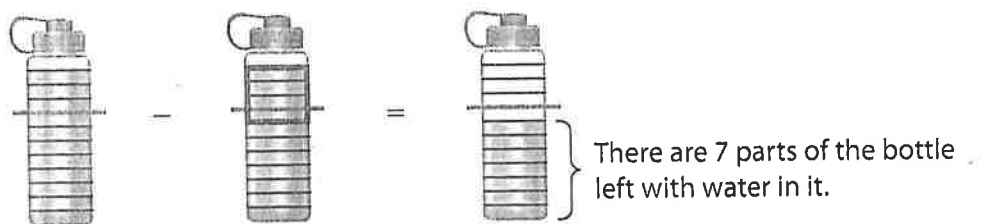
Gavin's water bottle has  $1\frac{3}{8}$  cups of water. He drinks  $\frac{1}{2}$  cup. How much water is left in the bottle?

**Picture It** You can use a picture to model subtracting fractions.

The water bottle is shaded to show that it has  $1\text{ cup} + \frac{3}{8}\text{ cup}$  of water in it. 1 cup is equivalent to  $\frac{8}{8}$  cup. The bottle has 11 eighths shaded.

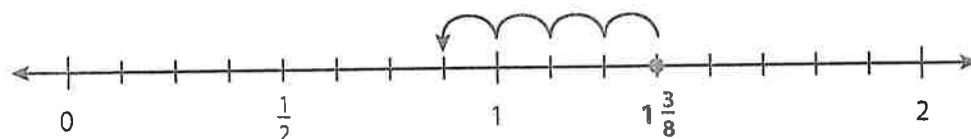


Gavin drinks  $\frac{1}{2}$  cup, or  $\frac{4}{8}$  cup. So take away 4 shaded parts of the bottle to show how much is left.



**Model It** You can use a number line to model subtracting fractions.

The number line below is divided into  $\frac{1}{8}$ s with a point at  $1\frac{3}{8}$ .



$\frac{1}{2}$  is equivalent to  $\frac{4}{8}$ .  $\frac{4}{8}$  is four  $\frac{1}{8}$  units on the number line. Start at  $1\frac{3}{8}$  and jump left  $\frac{4}{8}$ .



**Connect It** Now you will solve the problem from the previous page using equivalent fractions and a subtraction equation.

**1** Estimate the amount of water left in Gavin's bottle. \_\_\_\_\_

**2** How did you get your estimate? \_\_\_\_\_

**3** Look at *Picture It* and *Model It* on the previous page. Why is  $\frac{1}{2}$  rewritten as  $\frac{4}{8}$ ? \_\_\_\_\_

**4** Use the number line on the previous page to rewrite  $1\frac{3}{8}$  as a fraction greater than 1. Then use it to write a subtraction equation with equivalent fractions.

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

**5** Why was it helpful to rewrite  $1\frac{3}{8}$  as a fraction greater than 1? \_\_\_\_\_

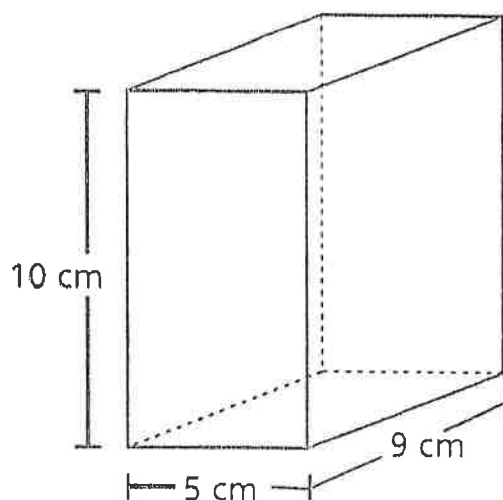
**6** Explain how to subtract two fractions with unlike denominators. \_\_\_\_\_

**Try It** Use what you just learned about subtracting fractions with unlike denominators to solve these problems. Show your work on a separate sheet of paper.

**1** What is  $\frac{7}{8} - \frac{1}{2}$ ? \_\_\_\_\_

**2** Emily's living room window is  $2\frac{5}{6}$  feet wide. The window in her bedroom is  $1\frac{1}{3}$  feet wide. How much wider is the living room window than her bedroom window? \_\_\_\_\_

- 1 A gift box is in the shape of a right rectangular prism, as pictured below.



What is the volume, in cubic centimeters, of the gift box?

- A 24
- B 45
- C 225
- D 450
- 2 What is the sum of  $\frac{2}{10} + \frac{6}{100}$ ?

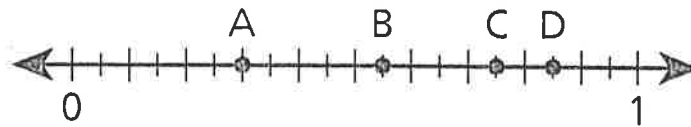
- A  $\frac{8}{10}$
- B  $\frac{8}{100}$
- C  $\frac{26}{10}$
- D  $\frac{26}{100}$

GO ON

- 3 On Saturday, Mark sold  $2\frac{7}{8}$  gallons of lemonade. On the same day, Regan sold  $\frac{2}{3}$  as much lemonade as Mark. How much lemonade, in gallons, did Regan sell?

- A  $1\frac{5}{16}$
- B  $1\frac{11}{12}$
- C  $2\frac{7}{12}$
- D  $4\frac{5}{16}$

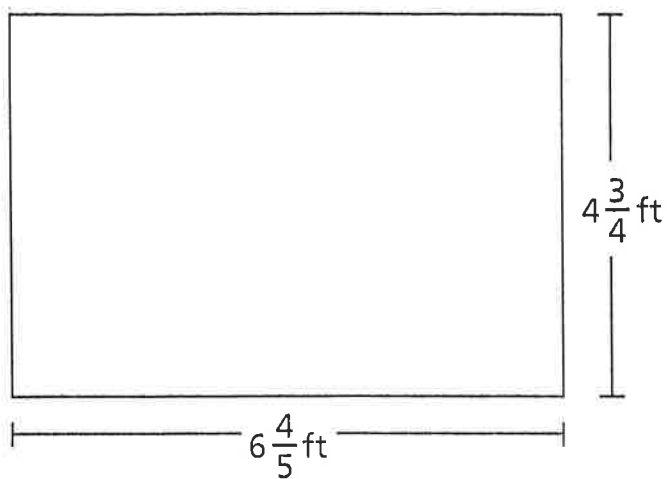
- 4 Which point on the number line below represents a value of 0.75?



- A point A
- B point B
- C point C
- D point D

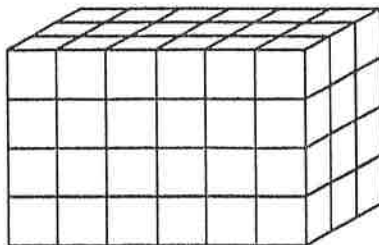


- 13 What is the area, in square feet, of the rectangle shown below?



- A  $11\frac{11}{20}$   
B  $24\frac{12}{20}$   
C  $27\frac{4}{20}$   
D  $32\frac{6}{20}$

- 18 Which expression **cannot** be used to determine the volume of the rectangular prism pictured below?



- A  $12 \times 6$
- B  $18 \times 4$
- C  $6 \times 3 \times 4$
- D  $6 \times 4 \times 6$
- 19 What is 15.74 rounded to the nearest whole number?
- A 10
- B 15
- C 16
- D 20

- 20 Jack puts  $\frac{1}{3}$  pound of birdseed into his bird feeder every time he fills it. How many times can Jack fill his bird feeder with 4 pounds of birdseed?

A  $1\frac{1}{3}$

B  $3\frac{2}{3}$

C 11

D 12

- 21 Carlos makes 1 pound of snack mix using nuts, raisins, and cereal. The list below shows how many pounds of nuts and raisins he uses.

- $\frac{1}{3}$  pound of nuts
- $\frac{2}{5}$  pound of raisins

How much cereal, in pounds, does Carlos use?

A  $\frac{3}{8}$

B  $\frac{5}{8}$

C  $\frac{4}{15}$

D  $\frac{11}{15}$

26 What is the value of the expression  $\frac{1}{7} \div 5$ ?

A  $\frac{1}{12}$

B  $\frac{1}{35}$

C  $\frac{5}{7}$

D  $\frac{6}{7}$

27 Cole has a rectangular garden with an area of 16.02 square meters. The length of the garden is 4.5 meters. What is the width, in meters, of the garden?

A 3.56

B 11.52

C 16.12

D 20.52

28 A school raised a total of \$1,648 to purchase new books. The money raised will be shared equally among 8 different classrooms. What is the total amount of money each classroom will receive?

A \$206

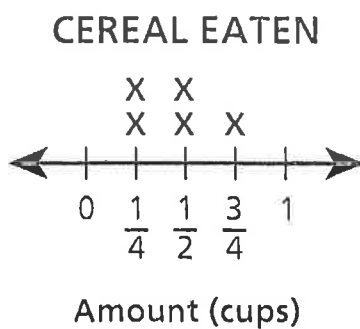
B \$207

C \$260

D \$270

**GO ON**

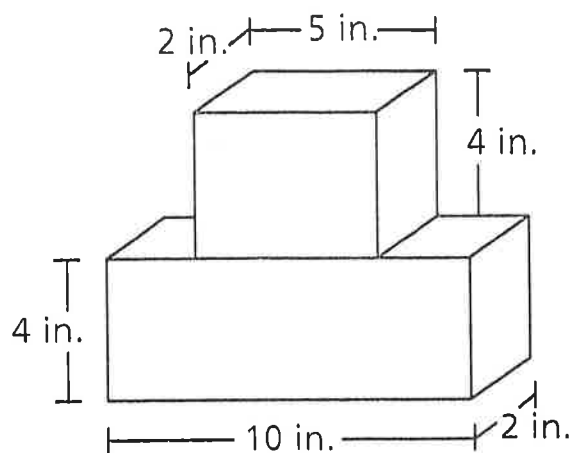
- 29 The line plot below shows the amount of cereal Shyanne ate in 5 days.



What is the total number of cups of cereal that Shyanne ate in the 5 days?

- A  $1\frac{1}{2}$
- B  $1\frac{3}{4}$
- C  $1\frac{4}{6}$
- D  $2\frac{1}{4}$

- 30 Lana used the two blocks pictured in the diagram to build a tower.



**LANA'S TOWER**

What is the total volume, in cubic inches, of the tower Lana built?

- A 27
- B 80
- C 116
- D 120

**STOP**

31 Which statement about rectangles and rhombuses is always true?

- A Both figures are squares.
- B Both figures are quadrilaterals.
- C Both figures have four right angles.
- D Both figures have four congruent sides.

32 What is the value of the expression  $\frac{2}{5} + \frac{3}{7}$ ?

- A  $\frac{5}{35}$
- B  $\frac{6}{35}$
- C  $\frac{5}{12}$
- D  $\frac{29}{35}$

33 Which measurement is equivalent to 4,000 centimeters?

- A 4 meters
- B 40 meters
- C 400 meters
- D 40,000 meters

**GO ON**

- 34 Zaire is making granola bars. For one batch of bars, the recipe requires  $1\frac{2}{3}$  cups of rolled oats, and  $\frac{1}{2}$  cup raisins. What is the combined amount, in cups, of rolled oats and raisins that is used in one batch of granola bars?
- A  $1\frac{1}{5}$
- B  $1\frac{3}{5}$
- C  $2\frac{1}{3}$
- D  $2\frac{1}{6}$
- 35 In a science class, Paula made a mixture by adding 2.05 milliliters of hydrogen peroxide and 6.15 milliliters of water together. Equal amounts of the whole mixture were poured into 5 empty containers. How much of the mixture, in milliliters, did she pour into each container?
- A 0.61
- B 1.64
- C 3.2
- D 13.4
- 36 What is 482.073 expressed in word form?
- A four eighty-two and seventy-three thousandths
- B four hundred eighty-two thousand seventy-three
- C four hundred eighty-two and seventy-three hundredths
- D four hundred eighty-two and seventy-three thousandths



- 37 Marco bakes cookies for his class. He uses  $\frac{3}{4}$  cup of butter in each batch of cookies and bakes  $2\frac{1}{2}$  batches. Which equation can be used to determine the number of cups of butter Marco uses to bake cookies?

A  $\frac{5}{2} \times \frac{3}{4} = 1\frac{7}{8}$

B  $\frac{3}{2} \times \frac{3}{4} = 1\frac{1}{8}$

C  $\frac{5}{2} \times \frac{4}{3} = 3\frac{1}{3}$

D  $\frac{3}{2} \times \frac{4}{3} = 2$

- 38 Which expression is **not** equivalent to  $\frac{2}{3} \times 4$ ?

A  $(2 \times 4) \div 3$

B  $\frac{1}{3} \times (2 \times 4)$

C  $\left(4 \times \frac{1}{3}\right) \times 2$

D  $\left(2 \times \frac{1}{3}\right) + \left(4 \times \frac{1}{3}\right)$

- 39 Martin is using unit cubes to build a tower in the shape of a right rectangular prism. A description of the tower is listed below.

- bottom layer is made of 16 unit cubes
- bottom layer is in the shape of a square prism
- 9 more equal layers of unit cubes are added on top of the bottom layer

What is the total volume, in cubic units, of the completed tower?

*Show your work.*

*Answer* \_\_\_\_\_ cubic units

**GO ON**

- 40 Joel has a goal to practice his clarinet for  $4\frac{1}{2}$  hours per week. The list below shows the number of hours Joel has practiced so far this week.

- Monday:  $1\frac{1}{2}$  hours
- Wednesday:  $1\frac{1}{4}$  hours
- Thursday: 1 hour

How many more hours does Joel need to practice this week to meet his goal?

*Show your work.*

*Answer* \_\_\_\_\_ hours

**GO ON**

- 41 How does the value of the digit 2 in the number 32,000 compare with the value of the digit 2 in the number 26,000?

*Explain your answer.*

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**GO ON**

- 42 There are 5 cups of oatmeal in a container. Stella eats  $\frac{1}{3}$  cup of the oatmeal every day for breakfast. In how many days will Stella finish all the oatmeal in the container?

*Show your work.*

*Answer* \_\_\_\_\_ days

**GO ON**

- 43 Olga decorates blankets with ribbon. She has 12 yards of ribbon. She uses 22 feet of the ribbon to decorate blankets. After she decorates the blankets, how many feet of ribbon remain?

*Show your work.*

*Answer* \_\_\_\_\_ feet

**GO ON**

- 44 In the expression  $5 \times \frac{y}{7}$ , what value of  $y$  would make a product greater than 5?

*Explain your answer.*

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**GO ON**

45

Diane has pizza dough for making pizzas. She separates the dough into the three portions listed below.

- Portion A is 8.25 ounces.
- Portion B is twice as much as portion A.
- Portion C is twice as much as portion B.

What is the weight, in ounces, of portion B and the weight, in ounces, of portion C?

*Show your work.*

**Answer** Portion B \_\_\_\_\_ ounces

Portion C \_\_\_\_\_ ounces

**STOP**