Journal Prompt

Are you a sports fan?

If yes, what's your favorite sport? What do you enjoy about watching it?

If no, why not? Explain.

CASEY AT THE BAT

BY ERNEST LAWRENCE THAYER

Taken From the San Francisco Examiner - June 3, 1888

The outlook wasn't brilliant for the Mudville nine that day;
The score stood four to two, with but one inning more to play,
And then when Cooney died at first, and Barrows did the same,
A pall-like silence fell upon the patrons of the game.

A straggling few got up to go in deep despair. The rest
Clung to that hope which springs eternal in the human breast;
They thought, "If only Casey could but get a whack at that —
We'd put up even money now, with Casey at the bat."

But Flynn preceded Casey, as did also Jimmy Blake,
And the former was a hoodoo, while the latter was a cake;
So upon that stricken multitude grim melancholy sat;
For there seemed but little chance of Casey getting to the bat.

But Flynn let drive a single, to the wonderment of all,
And Blake, the much despised, tore the cover off the ball;
And when the dust had lifted, and men saw what had occurred,
There was Jimmy safe at second and Flynn a-hugging third.

Then from five thousand throats and more there rose a lusty yell;
It rumbled through the valley, it rattled in the dell;
It pounded on the mountain and recoiled upon the flat,
For Casey, mighty Casey, was advancing to the bat.

There was ease in Casey's manner as he stepped into his place;
There was pride in Casey's bearing and a smile lit Casey's face.
And when, responding to the cheers, he lightly doffed his hat,
No stranger in the crowd could doubt 'twas Casey at the bat.

Ten thousand eyes were on him as he rubbed his hands with dirt.
Five thousand tongues applauded when he wiped them on his shirt.

Then while the writhing pitcher ground the ball into his hip,
Defiance flashed in Casey's eye, a sneer curled Casey's lip.

And now the leather-covered sphere came hurtling through the air,
And Casey stood a-watching it in haughty grandeur there.
Close by the sturdy batsman the ball unheeded sped —
"That ain't my style," said Casey. "Strike one!" the umpire said.

From the benches, black with people, there went up a muffled roar,
Like the beating of the storm-waves on a stern and distant shore;
"Kill him! Kill the umpire!" shouted some one on the stand;
And it's likely they'd have killed him had not Casey raised his hand.

With a smile of Christian charity great Casey's visage shone;
He stilled the rising tumult; he bade the game go on;
He signaled to the pitcher, and once more the dun sphere flew;
But Casey still ignored it, and the umpire said "Strike two!"

"Fraud!" cried the maddened thousands, and echo answered "Fraud!"
But one scornful look from Casey and the audience was awed.
They saw his face grow stern and cold, they saw his muscles strain,
And they knew that Casey wouldn't let that ball go by again.

The sneer has fled from Casey's lip, the teeth are clenched in hate;
He pounds with cruel violence his bat upon the plate.
And now the pitcher holds the ball, and now he lets it go,
And now the air is shattered by the force of Casey's blow.

Oh, somewhere in this favored land the sun is shining bright,
The band is playing somewhere, and somewhere hearts are light,
And somewhere men are laughing, and little children shout;
But there is no joy in Mudville — mighty Casey has struck out.

CASEY AT THE BAT

Comprehension Quiz

Choose the best answer.

1. When the poem begins, it is _____.
    a. the first inning
    b. halftime
    c. the third inning
    d. the last inning

2. After two players struck out, Flynn and Blake surprised the crowd by…
    a. hitting foul balls.
    b. making it on base.
    c. both hitting home runs.
    d. betting on Casey.

3. How did the crowd react when Casey advanced to the bat?
    a. booing
    b. spitting
    c. cheering
    d. sneering

4. How did Casey respond to the crowd?
    a. he lightly doffed his hat
    b. he cursed loudly
    c. he spit on home plate
    d. he smiled brightly

5. What did Casey do on the first pitch?
    a. swing and miss
    b. swing and hit
    c. hit a home run
    d. nothing

6. What did Casey do on the second pitch?
    a. swing and miss
    b. swing and hit
    c. hit a home run
    d. nothing

7. After the second pitch, the crowd became angry with _____.
    a. the pitcher
    b. Casey
    c. the umpire
    d. the catcher

8. What did Casey do on the third pitch?
    a. swing and miss
    b. swing and hit
    c. hit a home run
    d. nothing

Diagramming a Story

Story:_____ Author:_____

- Exposition: Who are the characters? What is the setting? What incident sets the story in motion?

- Rising Action: What are the main events in the story? What complications make it difficult for characters to reach their goals?

- Climax: What is the most exciting or intense moment of the story?

- Falling Action: What loose ends of the story are tied up?

- Resolution: How does the story end?

Text Evidence Activity - Part A

First, read through the pieces of text evidence in the table below. Then, read the statements 1-5. For each item, find the appropriate piece of text evidence and color it the requested color.

1. Find evidence that creates tension and builds suspense. Color it pink.
2. Find evidence that characterizes Casey as over-confident. Color it yellow.
3. Find two pieces of evidence that the crowd was very emotionally involved in the game. Color them green.
4. Find two pieces of text evidence that shows that the crowd believes Casey is the best player on the team. Color them blue.
5. Find two pieces of evidence that include events that surprised the crowd. Color them purple.

A. And now the leather-covered sphere came hurtling through the air, And Casey stood a-watching it in haughty-grandeur there.
B. But Flynn let drive a single, to the wonderment of all, And the much despised Blakey "tore the cover off the ball."
C. Then from the gladdened multitude went up a joyous yell- It rumbled in the mountaintops, it rattled in the dell;
D. They thought, "If only Casey could but get a whack, at that, We'd put up even money now, with Casey at the bat.
E. And now the picture holds the ball, and now he lets it go, And now the air is shattered by the force of Casey's blow.
F. From the benches, filled with people, there went up a muffled roar, Like the beating of the storm-waves on a stern and distant shore.
G. And somewhere men are laughing, and somewhere children shout, But there is no joy in Mudville - Mighty Casey has struck out.
H. Ten thousand eyes were on him as he rubbed his hands with dirt; Five thousand tongues applauded when he wiped them on his shirt.

Text Evidence Activity - Part B

First, read through the pieces of text evidence below. Highlight any text evidence that shows Casey's arrogance. Then, using at least two examples of text evidence, explain how the author uses this arrogance to send a message or teach a lesson to the reader about the consequences of being too arrogant.

"That ain't my style," said Casey. "Strike one!" the umpire said.
There was Blakey safe at second, and Flynn a-huggin' third.
Defiance flashed in Casey's eye, a sneer curled Casey's lip.
But Casey still ignored it and the umpire said, "Strike two!"
For Casey, mighty Casey, was advancing to the bat.
And they knew that Casey wouldn't let that ball go by again.

How does the author use Casey's arrogance to teach the reader a lesson about the consequences of being too arrogant?

_____

_____

_____

_____

_____

_____

_____

_____

_____

Theme Activity

Read the familiar fable below. Then go back and read the fable a second time. As you read for the second time, highlight evidence in the fable that shows that the hare is too arrogant.

The Hare & the Tortoise by Aesop

A Hare was making fun of the Tortoise one day for being so slow.

"Do you ever get anywhere?" he asked with a mocking laugh.

"Yes," replied the Tortoise, "and I get there sooner than you think. I'll run you a race and prove it."

The Hare was much amused at the idea of running a race with the Tortoise, but for the fun of the thing he agreed. So the Fox, who had consented to act as a judge, marked the distance and started the runners off.

The Hare was soon far out of sight, and to make the Tortoise feel very deeply how ridiculous it was for him to try a race with a Hare, he lay down beside the course to take a nap until the Tortoise should catch up.

The Tortoise meanwhile kept going but steadily, and, after a time, passed a place where the Hare was sleeping. But the Hare slept on very peacefully; and when at last he did wake up, the Tortoise was near the goal. The Hare now ran his swiftest, but he could not overtake the Tortoise in time.

1. Think about the Hare's arrogance. Write a **theme** statement for the fable.

_____

2. How is the theme developed in the fable? Use text evidence in your answer.

_____

_____

_____

_____

_____

_____

_____

Annotate Figurative Language

Find, underline, and label each instance of figurative language in the paragraph. Check it on the list as you go. You should find:

___ Metaphor (4) ___ Simile (3) ___ Personification (5) ___ Alliteration (4)

___ Onomatopoeia (4) ___ Allusion (3) ___ Idiom (3) ___ Hyperbole (3)

It was finally here! Felicity had been looking forward to the first day of fourth grade for weeks. She and her mother had been preparing for the big day, and all Felicity could think about was how excited she was to meet her teachers and see her friends. Bzzzzz! When the alarm went off, Felicity leapt like a spring out of bed. As quick as a flash, she dressed, brushed her teeth, and combed her hair. She raced down the stairs and plopped into her seat at the table. She wasn't hungry, but it looked like her mom was making enough pancakes to feed an army.

Felicity's brother, Frank, shuffled into the room. He was starting the seventh grade and was a lot less excited than Felicity. In fact, he was a bear, growling and grumbling his way across the room. "I don't see why I have to go," said Frank. "By the time you're my age, you know all of the important things."

Felicity's mom put a mountain of pancakes in front of Frank. "Eat up, Einstein," she said. "It will do you good to go back to school. You've been a sloth all summer." Frank was about to argue with Mom, but the beep of the microwave summoned her, and she went back into the kitchen. Frank hung his head. "I'm feeling under the weather. I should stay home." He turned his attention to Felicity. "What are you smiling at? What are you, the Cheshire Cat?"

Felicity shrugged. "I'm just excited."

Frank scowled. Felicity could see his mood darkening like the sky before a storm. “When you get to be my age, there’s a lot more to school than getting a big bedazzled backpack and a pack of pristine pencils. The teachers expect you to be Shakespeare, Copernicus, and Beethoven rolled up into one. It’s miserable.”

“Do you hear that?” Felicity said. In the distance, she heard the faint moan of the school bus and knew it had begun to crawl up the big hill to their house. “We have to go!” Felicity yelled to her mother, “We’re leaving!” and turned to Frank. “Don’t drag your feet! You don’t want to miss the bus!”

“Okay, okay,” said Frank. “You don’t have to jump all over me. I’m coming.”

In the blink of an eye, Felicity was out the door, galloping toward the bus stop. She was a race horse, excited to get to the starting gate. Frank, on the other hand, was a snail, taking his time, but he still made it to the stop before the bus.

The big yellow creature screamed to a stop. It opened its mouth with a whine, and Frank and Felicity climbed aboard, off to the adventure of the first day of school.

Comprehension Skills

Remember, a **stanza** is similar to a **paragraph** in a story.

1. Which **character traits** below best describe Casey in the poem?
    a. athletic and modest
    b. proud and arrogant
    c. careless and lazy
    d. tall and handsome

2. Which text evidence below best supports your answer to #1?
    a. “That ain’t my style,” said Casey. “Strike one!” the umpire said.
    b. For Casey, mighty Casey, was advancing to the bat.
    c. For there seemed but little chance of Casey getting to the bat.
    d. They thought, “If only Casey could but get a whack, at that,”

3. Which sentence best summarizes the third stanza of the poem?
    a. Casey will get a chance to bat after all.
    b. Flynn and Blake did surprisingly well at bat, leaving Flynn on third and Blake on second.
    c. The fans went nuts when they realized that Casey was up to bat next.
    d. Flynn and Blake were both very weak players, and the crowd doubted their abilities to make it on base.

4. How does stanza 1 contribute to the development of the plot?
    a. Stanza 1 introduces important characters.
    b. Stanza 1 describes the complications that will arise later.
    c. Stanza 1 includes the exposition and sets the mood.
    d. Stanza 1 creates suspense that builds towards the climax.

5. Which line of the poem shows that the crowd believed in Casey’s ability?
    a. ”We’d put up even money now, with Casey at the bat.”
    b. Five thousand tongues applauded when he wiped them on his shirt;
    c. And they knew that Casey wouldn’t let that ball go by again.
    d. all of these

6. Which of these statements is a theme of “Casey at the Bat”?
    a. Every game has a winner and a loser; some you win, some you lose.
    b. Theteamwiththemosttalentalwayswins.
    c. If your team is losing a game, it’s a good idea to leave early.
    d. all of these

7. Read this excerpt from the poem: There was ease in Casey's manner as he stepped into his place; There was pride in Casey's bearing and a smile lit Casey's face. The author's repeated use of the /s/ sound is _____.

   a. alliteration
   b. onomatopoeia
   c. consonance
   d. assonance

8. Reread the excerpt in the previous question. What effect does this sound device have on the poem when it is read aloud?

   a. It makes each syllable sound harsh.
   b. It helps the words and lines flow together smoothly.
   c. It creates a peaceful mood.
   d. It adds humor.

9. Why did the author likely write this poem?

   a. To entertain baseball fans and those who love the sport.
   b. To encourage people to go to baseball games.
   c. To describe what winning a big game feels like.
   d. To explain to people how to play baseball.

10. Do you think that Casey is the only one to blame for losing the game? Explain your answer.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

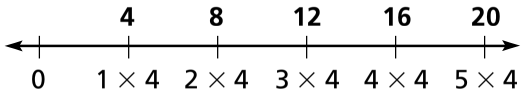
Name _____

Multiples

Skill 7

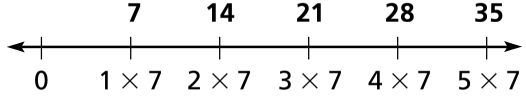
A multiple is the product of a number and any whole number except zero.

List the first five multiples of 4. Multiply 4 by the numbers 1, 2, 3, 4, and 5.



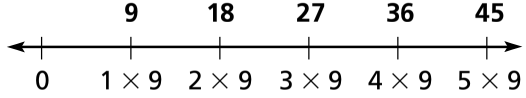
The first five multiples of 4 are: **4, 8, 12, 16, 20.**

List the first five multiples of 7. Multiply 7 by the numbers 1, 2, 3, 4, and 5.



The first five multiples of 7 are: **7, 14, 21, 28, 35.**

List the first five multiples of 9. Multiply 9 by the numbers 1, 2, 3, 4, and 5.



The first five multiples of 9 are: **9, 18, 27, 36, 45.**

Try These

List the first five multiples of the number.

1. 3

_____, _____, _____, _____, _____
↑ ↑ ↑ ↑ ↑
1 × 3 2 × 3 3 × 3 4 × 3 5 × 3

The first five multiples of 3 are: _____

2. 2

_____, _____, _____, _____, _____
↑ ↑ ↑ ↑ ↑
1 × 2 2 × 2 3 × 2 4 × 2 5 × 2

The first five multiples of 2 are: _____

3. 6

_____, _____, _____, _____, _____
↑ ↑ ↑ ↑ ↑
1 × 6 2 × 6 3 × 6 4 × 6 5 × 6

The first five multiples of 6 are: _____

Go to the next side.

Name _____ Skill _____

Practice on Your Own

Skill 7

Think: A multiple is the product of the number and any whole number except zero.

List the first five multiples of 5.

5	10	15	20	25
↑	↑	↑	↑	↑
1×5	2×5	3×5	4×5	5×5

The first five multiples of 5 are:
5, 10, 15, 20, 25.

List the first five multiples of the number.

1 8

_____, _____, _____, _____, _____
↑ ↑ ↑ ↑ ↑
1×8 2×8 3×8 4×8 5×8

The first five multiples of 8 are:

_____

2 10

_____, _____, _____, _____, _____
↑ ↑ ↑ ↑ ↑
1×10 2×10 3×10 4×10 5×10

The first five multiples of 10 are:

_____

3 11

The first five multiples of 11 are:

11, _____, _____, _____, _____
$\square \times 11$ $\square \times 11$ $\square \times 11$ $\square \times 11$ $\square \times 11$

4 12

The first five multiples of 12 are:

12, _____, _____, _____, _____
$\square \times 12$ $\square \times 12$ $\square \times 12$ $\square \times 12$ $\square \times 12$

5 20

20, _____, _____, _____, _____

6 30

30, _____, _____, _____, _____

List the next three multiples of the number.

7 4

4, 8, 12, 16, 20, 24, _____, _____, _____

8 7

7, 14, 21, 28, 35, _____, _____, _____

Check

List the next three multiples of the number.

9 15

15, 30, 45, _____, _____, _____

10 25

25, 50, 75, _____, _____, _____

Name _____ Skill 8

Factors

Factors are two or more numbers that are multiplied.

Find all of the whole-number factors of 8.

Step 1 Use multiplication or division facts to find factors.
Start with 1×8.
Every counting number has at least two factors, 1 and the number itself.
So, 1 and 8 are factors of 8.

$1 \times 8 = 8 \leftarrow$ product
$\uparrow$
factors

A factor always divides the product without a remainder.

Step 2 Test other factor pairs.
The only possible whole-number factors of 8 are numbers from 1 to 8.
Is 2 a factor?

$1 \times 8 = 8$ 1 and 8 are factors.
$2 \times 4 = 8$ 2 and 4 are factors.

Step 3 Continue until the factors repeat.

$1 \times 8 = 8$ 1 and 8 are factors.
$\mathbf{2} \times \mathbf{4} = 8$ 2 and 4 are factors.
$3 \times ? = 8$ 3 is **not** a factor, because $8 \div 3$ has a remainder.
$\mathbf{4} \times \mathbf{2} =$ When the factors repeat, you have found all the factors.

So, the factors of 8 are 1, 2, 4, and 8.

Try These

Find the whole-number factors.

1 6

___ × ___ = 6
___ × ___ = 6
The factors of 6 are:
_____

2 10

___ × ___ = 10
___ × ___ = 10
The factors of 10 are:
_____

3 16

___ × ___ = 16
___ × ___ = 16
___ × ___ = 16
The factors of 16 are:
_____

Go to the next side.

Name _____ Skill _____

Practice on Your Own

Skill 8

List all of the factors of 7.

Think: Start with 1 and 7. Then try 2, then 3, then 4, and so on. If you repeat a pair of factors, you have found all the factors.

$1 \times 7 = 7$ ← **1 and 7 are factors.**
$2 \times ? = 7$ ← 2 is not a factor.
$3 \times ? = 7$ ← 3 is not a factor.
$4 \times ? = 7$ ← 4 is not a factor.
$5 \times ? = 7$ ← 5 is not a factor.
$6 \times ? = 7$ ← 6 is not a factor.
$7 \times 1 = 7$ ← These repeat.

You have found all the factors.
The factors of 7 are 1 and 7.

2, 3, 4, 5, and 6 are not factors because when 7 is divided by each of these numbers, there is a remainder.

Write all the factors of the number.

1 9

___ × ___ = 9
___ × ___ = 9
The factors of 9 are:
_____

2 14

___ × ___ = 14
___ × ___ = 14
The factors of 14 are:
_____

3 20

___ × ___ = 20
___ × ___ = 20
___ × ___ = 20
The factors of 20 are:
_____

4 12

___ × ___ = 12
___ × ___ = 12
___ × ___ = 12
The factors of 12 are:
_____

5 15

___ × ___ = 15
___ × ___ = 15
The factors of 15 are:
_____

6 11

___ × ___ = 11
The factors of 11 are:
_____

7 17

The factors of 17 are:
_____

8 24

The factors of 24 are:
_____

9 39

The factors of 39 are:
_____

Check

Write all the factors of the numbers.

10 18

The factors of 18 are:
_____

11 28

The factors of 28 are:
_____

12 13

The factors of 13 are:
_____

Name _____

Multiplication Properties (Distributive)

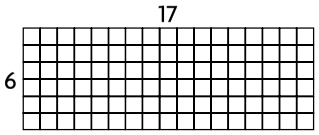
Skill 49

Use the distributive property to find 6 × 17.

The Distributive Property of Multiplication
Multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products.

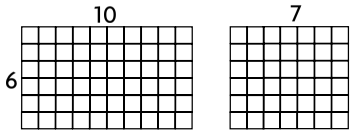
$a \times (b + c) = (a \times b) + (a \times c)$

Step 1
Use grid paper.
Draw an array that shows 6 × 17.



Step 2
Break apart the grid to show the factor 17 as the addends 10 + 7.

$6 \times (10 + 7) = (6 \times 10) + (6 \times 7)$



$(6 \times 10) + (6 \times 7)$ ← Multiply.

$60 + 42$ ← Add.

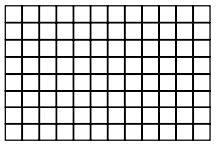
102

So, $6 \times 17 = (6 \times 10) + (6 \times 7) = 102$.

Try These

Use the Distributive Property to find the products.

1



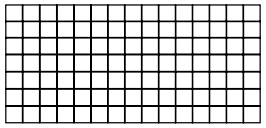
8×12

$8 \times 12 = (8 \times 10) + (8 \times 2)$

$= \_\_\_\_ \quad \_\_\_\_$

$= \_\_\_\_$

2



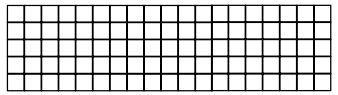
7×15

$7 \times 15 = (7 \times 10) + (7 \times 5)$

$= \_\_\_\_ \quad \_\_\_\_$

$= \_\_\_\_$

3



5×19

$5 \times 19 = (5 \times 10) + (5 \times 9)$

$= \_\_\_\_ \quad \_\_\_\_$

$= \_\_\_\_$

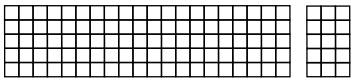
Go to the next side.

Name _____ Skill _____

Practice on Your Own

Skill 49

Use the Distributive Property. Find 5×23.

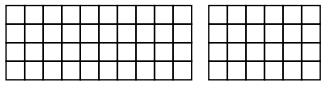


1. Draw a 5 by 23 grid.
2. Break apart 23 as 20 and 3.
3. Find 5×20 and 5×3.
4. Add the products.

$$5 \times 23 = (5 \times 20) + (5 \times 3)$$
$$= 100 + 15$$
$$= 115$$

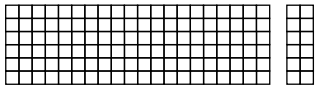
Use the Distributive Property to find the product.

1 4×16



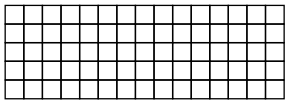
$4 \times 16 = (4 \times \_\_\_\_) + (4 \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

2 6×22



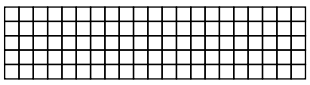
$6 \times 22 = (6 \times \_\_\_\_) + (6 \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

3 5×15



$5 \times 15 = (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

4 5×21



$5 \times 21 = (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

Check

Use the Distributive Property to find the product.

5 8×16

$8 \times 16 = (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

6 7×24

$7 \times 24 = (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_$
$= \_\_\_\_$

Name _____ Skill _____

Practice on Your Own

Skill 17

Order the numbers from greatest to least: 1.37, 1.56, 1.23, 1.59.
List the numbers. Compare two numbers at a time.

1.37
1.56
1.23
1.59

Compare these first. Their tenths digits are different.

The ones digits are the same.

1.37 ○ 1.23
3 > 2
1.37 > 1.23

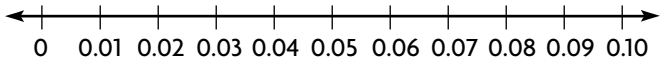
1.37 ○ 1.56
3 < 5
1.37 < 1.56

1.56 ○ 1.59
6 < 9
1.56 < 1.59

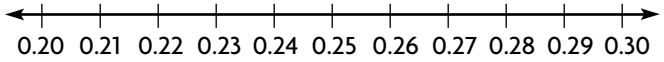
Ordered from greatest to least: 1.59, 1.56, 1.37, 1.23

Use the number line. Write >, <, or = for ○.

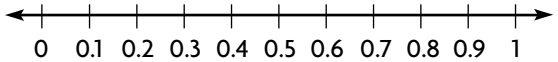
1. 0.09 ○ 0.02



2. 0.25 ○ 0.30



3. 0.5 ○ 0.1



Use place value. Write >, <, or = for ○.

4. 2.06 ○ 2.10

ones	.	tenths	hundredths

5. 4.8 ○ 4.19

ones	.	tenths	hundredths

6. 7.36 ○ 7.36

ones	.	tenths	hundredths

Order the numbers from least to greatest, or greatest to least.

7. 3.42, 0.89, 0.91

_____, _____, _____
least greatest

8. 2.65, 0.03, 2.4, 0.5

_____, _____, _____, _____
least greatest

9. 1.18, 1.27, 1.11, 1.3

_____, _____, _____, _____
greatest least

Check

In Exercises 10 and 11, write >, <, or = for ○.

10. 0.72 ○ 0.7

11. 5.28 ○ 5.29

12. Order from greatest to least.
2.83, 1.7, 2.48, 2.38
_____

13. Order from least to greatest.
1.38, 0.5, 1.83, 1.18
_____

Name _____

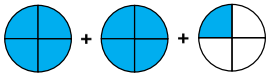
Write an Improper Fraction as a Mixed Number

Skill 21

You can write an improper fraction as a mixed number. Write the fraction $\frac{9}{4}$ as a mixed number.

These are some different names for 1:
$\frac{2}{2}$ $\frac{3}{3}$ $\frac{4}{4}$ $\frac{5}{5}$ $\frac{6}{6}$ $\frac{7}{7}$ $\frac{8}{8}$

Step 1
Model $\frac{9}{4}$ with circles for $\frac{1}{4}$.



$\frac{9}{4} = \frac{4}{4} + \frac{4}{4} + \frac{1}{4}$

Step 2
Group the $\frac{1}{4}$ parts as wholes and parts.

$\frac{9}{4} = \frac{4}{4} + \frac{4}{4} + \frac{1}{4}$

$= 1 + 1 + \frac{1}{4}$

Step 3
Write the sum as a mixed number.

$\frac{9}{4} = 1 + 1 + \frac{1}{4}$

$= 2 + \frac{1}{4}$

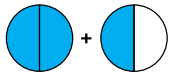
$= 2\frac{1}{4}$

So, $\frac{9}{4}$ written as a mixed number is $2\frac{1}{4}$.

Try These

Write each improper fraction as a mixed number.

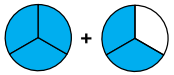
1 $\frac{3}{2} = \frac{2}{2} + \frac{1}{2}$



$= \_\_\_\_ + \frac{1}{2}$

$= \_\_\_\_$

2 $\frac{5}{3} = \frac{3}{3} + \frac{2}{3}$



$= \_\_\_\_ + \frac{2}{3}$

$= \_\_\_\_$

3 $\frac{11}{4} = \frac{4}{4} + \frac{4}{4} + \frac{3}{4}$

$= \_\_\_\_ + \_\_\_\_ + \frac{3}{4}$

$= \_\_\_\_$

Go to the next side.

Name _____ Skill _____

Practice on Your Own

Skill 21

Think:
Find the names for 1 in fraction form.
Then add the names for 1 and the fraction.
Write the sum as a mixed number.

$\frac{12}{5} = \frac{5}{5} + \frac{5}{5} + \frac{2}{5}$

$= 1 + 1 + \frac{2}{5}$

$= 2 + \frac{2}{5}$

$= 2\frac{2}{5}$

Write each improper fraction as a mixed number.

1 $\frac{9}{2} = \frac{\square}{2} + \frac{\square}{2} + \frac{\square}{2} + \frac{\square}{2} + \frac{\square}{2}$

$= \_\_ + \_\_ + \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

2 $\frac{8}{3} = \frac{\square}{3} + \frac{\square}{3} + \frac{\square}{3}$

$= \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

3 $\frac{15}{4} = \frac{\square}{4} + \frac{\square}{4} + \frac{\square}{4} + \frac{\square}{4}$

$= \_\_ + \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

4 $\frac{13}{5} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

5 $\frac{7}{2} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \_\_ + \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

6 $\frac{11}{3} = \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \_\_ + \_\_ + \_\_ + \_\_$

$= \_\_ + \_\_$

$= \_\_\_\_\_$

7 $\frac{15}{8} = \_\_\_\_\_$

8 $\frac{24}{5} = \_\_\_\_\_$

9 $\frac{19}{6} = \_\_\_\_\_$

Check

Write each improper fraction as a mixed number.

10 $\frac{25}{8} = \_\_\_\_\_$

11 $\frac{27}{10} = \_\_\_\_\_$

12 $\frac{17}{4} = \_\_\_\_\_$

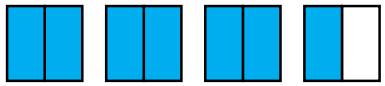
Name _____

Write a Mixed Number as a Fraction

Skill 22

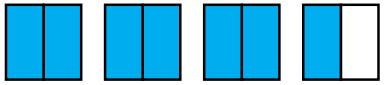
Write the mixed number $3\frac{1}{2}$ as an improper fraction.

Step 1
Write the whole number as a sum of ones.



$3\frac{1}{2} = 1 + 1 + 1 + \frac{1}{2}$

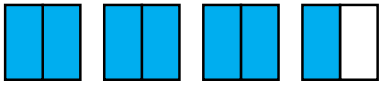
Step 2
Use the denominator of the fraction to write equivalent fractions for the ones.



$3\frac{1}{2} = \underset{\downarrow}{1} + \underset{\downarrow}{1} + \underset{\downarrow}{1} + \frac{1}{2}$

$= \frac{2}{2} + \frac{2}{2} + \frac{2}{2} + \frac{1}{2}$

Step 3
Add the numerators to find the improper fraction.



$3\frac{1}{2} = \underset{\downarrow}{1} + \underset{\downarrow}{1} + \underset{\downarrow}{1} + \frac{1}{2}$

$= \frac{2}{2} + \frac{2}{2} + \frac{2}{2} + \frac{1}{2}$

$= \frac{7}{2}$

So, the fraction for $3\frac{1}{2}$ is $\frac{7}{2}$.

Try These

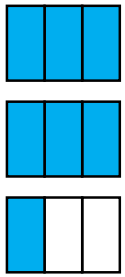
Write each mixed number as an improper fraction.

1 $2\frac{1}{3}$

$2\frac{1}{3} = 1 + 1 + \frac{1}{3}$

$= \frac{\square}{3} + \frac{\square}{3} + \frac{1}{3}$

$= \frac{\square}{3}$

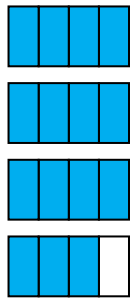


2 $3\frac{3}{4}$

$3\frac{3}{4} = 1 + 1 + 1 + \frac{3}{4}$

$= \frac{\square}{4} + \frac{\square}{4} + \frac{\square}{4} + \frac{3}{4}$

$= \frac{\square}{\square}$

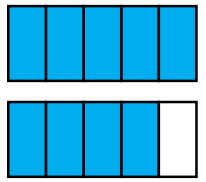


3 $1\frac{4}{5}$

$1\frac{4}{5} = 1 + \frac{4}{5}$

$= \frac{\square}{5} + \frac{4}{5}$

$= \frac{\square}{\square}$



Go to the next side.

Name _____ Skill _____

Practice on Your Own

Skill 22

Think:
Write the whole number as a sum of ones.
Write equivalent fractions for the ones.
Add the numerators to find the fraction.

$2\frac{2}{5} = 1 + 1 + \frac{2}{5}$

$= \frac{5}{5} + \frac{5}{5} + \frac{2}{5}$

$= \frac{12}{5}$

Write each mixed number as an improper fraction.

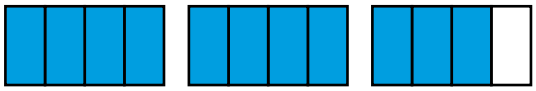
1 $4\frac{1}{2}$

$4\frac{1}{2} = 1 + 1 + 1 + 1 + \frac{1}{2}$

$= \frac{\square}{2} + \frac{\square}{2} + \frac{\square}{2} + \frac{\square}{2} + \frac{1}{2}$

$= \frac{\square}{\square}$

2 $2\frac{3}{4}$

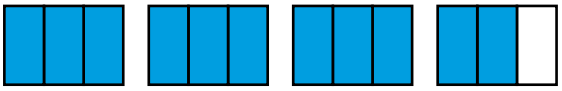


$2\frac{3}{4} = 1 + 1 + \frac{3}{4}$

$= \frac{\square}{4} + \frac{\square}{4} + \frac{3}{4}$

$= \frac{\square}{\square}$

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



$3\frac{2}{3} = 1 + 1 + 1 + \frac{2}{3}$

$= \frac{\square}{3} + \frac{\square}{3} + \frac{\square}{3} + \frac{2}{3}$

$= \frac{\square}{\square}$

4 $3\frac{2}{5}$

$3\frac{2}{5} = \_\_\_ + \_\_\_ + \_\_\_ + \frac{\square}{\square}$

$= \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \frac{\square}{\square}$

5 $2\frac{1}{8}$

$2\frac{1}{8} = \_\_\_ + \_\_\_ + \frac{\square}{\square}$

$= \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \frac{\square}{\square}$

6 $3\frac{5}{6}$

$3\frac{5}{6} = \_\_\_ + \_\_\_ + \_\_\_ + \frac{\square}{\square}$

$= \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square} + \frac{\square}{\square}$

$= \frac{\square}{\square}$

7 $5\frac{3}{4} =$ _____

8 $8\frac{4}{5} =$ _____

9 $6\frac{2}{3} =$ _____

Check

Write each mixed number as an improper fraction.

10 $5\frac{3}{4} =$ _____

11 $6\frac{1}{8} =$ _____

12 $4\frac{3}{5} =$ _____

Name _____ Skill _____

Practice on Your Own

Skill 38

Find: $27 \div 3 = \square$

Think: 3 times what number is 27?

$3 \times 9 = 27$

So, $27 \div 3 = 9$.

Find: $48 \div 6 = \square$

Use the multiplication table.

- Look across the top row to 6.
- Then look down to 48.
- Trace back from 48 to find the factor at the far left. It is 8.

So, $6 \times 8 = 48$

and $48 \div 6 = 8$.

x	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18
4	0	4	8	12	16	20	24
5	0	5	10	15	20	25	30
6	0	6	12	18	24	30	36
7	0	7	14	21	28	35	42
8	0	8	16	24	32	40	48

Use multiplication to divide.

1 **Think:** $7 \times 4 =$ ___

So, $28 \div 7 =$ ___

2 **Think:** $9 \times 7 =$ ___

So, $63 \div 9 =$ ___

3 **Think:** $4 \times 10 =$ ___

So, $40 \div 4 =$ ___

4 **Think:** $12 \times 4 =$ ___

So, $48 \div 12 =$ ___

5 **Think:** $5 \times 6 =$ ___

So, $30 \div 5 =$ ___.

6 **Think:** $7 \times 7 =$ ___

So, $49 \div 7 =$ ___.

7 **Think:** $3 \times 12 =$ ___

So, $36 \div 3 =$ ___.

8 **Think:** $9 \times 10 =$ ___

So, $90 \div 9 =$ ___.

Divide.

9 $56 \div 8 =$ ___

10 $33 \div 3 =$ ___

11 $42 \div 7 =$ ___

12 $54 \div 9 =$ ___

13 $32 \div 8 =$ ___

14 $28 \div 7 =$ ___

15 $44 \div 4 =$ ___

16 $84 \div 7 =$ ___

17 $36 \div 9 =$ ___

18 $24 \div 3 =$ ___

19 $81 \div 9 =$ ___

20 $56 \div 7 =$ ___

21 $49 \div 7 =$ ___

22 $108 \div 12 =$ ___

23 $72 \div 12 =$ ___

24 $48 \div 12 =$ ___

Check

Divide.

25 $35 \div 5 =$ ___

26 $22 \div 11 =$ ___

27 $99 \div 9 =$ ___

28 $60 \div 12 =$ ___

Question: Why does the moon appear to change shape?

THE MOON - EARTH'S SATELLITE

MOON DATA COMPARED TO EARTH				
Mass	Diameter	Avg Distance from Earth	Time of one rotation	Time of one revolution
12 % of Earth's mass	27% of Earth's diameter	384,000 km	27.3 days	27.3 days

The moon seems to shine because it reflects the sunlight.

The gravitational pull of Earth on the Moon causes the Moon to move in an orbit around the Earth. The changing relative positions of the Moon, Earth and Sun cause the phases of the Moon, eclipse and tides.

phases - the different forms the Moon takes in its appearance from Earth, sequence of phases is the lunar cycle lasting 29.5 days

new moon - when the moon is between Earth and Sun and can't be seen

a. Waxing Phases - more of the moon's near side is lit each night
   - waxing crescent - first visible thin slice of moon
   - first quarter - half the lighted side of moon is visible
   - waxing gibbous - more than one quarter is visible
   - full moon - all the moon's lighted side is visible

b. Waning Phases - less of the illuminated half of Moon is visible after a full moon
   - waning gibbous - starts after a full moon when more than half of lit side of moon is still visible
   - third quarter - only half the moon's lighted side is visible
   - waning crescent - last visible slice before a new moon

eclipse - when Earth or the Moon casts a shadow on the other
- solar eclipse - when Moon's shadow appears on Earth's surface
- lunar eclipse - occurs when the Moon moves into Earth's shadow

Features on the moon's surface include:

maria - dark, flat areas formed from lava 3-4 billion years ago

crater - large, round pits caused by impacts of meteoroids

highlands - oldest, most highly-cratered regions on the Moon

PART 1: Answer the Questions

Quiz: The Moon - Earth's Satellite

Use the diagram and your knowledge of the lunar cycle to help you answer the following.

1. Label the following steps:

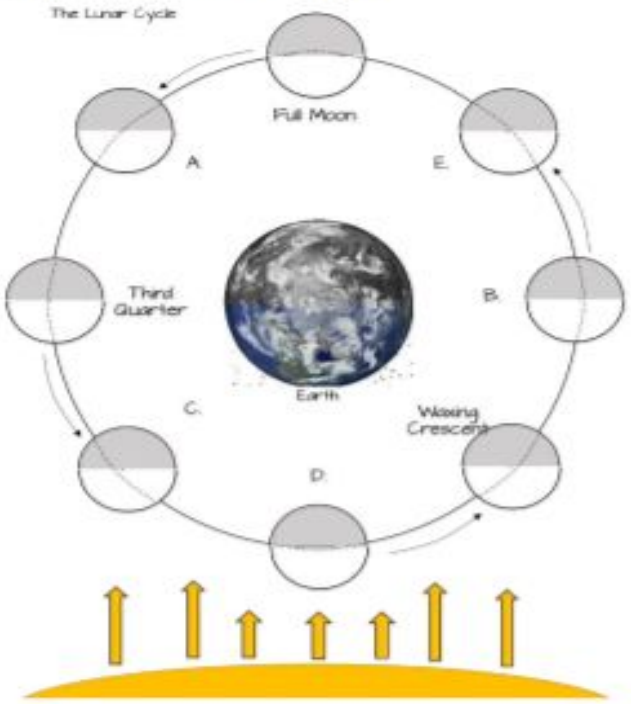
A. _____

B. _____

C. _____

D. _____

E. _____



2. Explain the difference between a solar eclipse and a lunar eclipse.

_____

_____

_____

_____

PART 2: Summarize

Write a summary (5 sentences or more) answering the question "Why does the moon appear to change shape?" Use quotation marks ("....") to cite evidence from the text. Be sure to indent, use proper grammar, spelling, and punctuation while writing your summary.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Question: How did the solar system come to be?

SOLAR SYSTEM

Geocentric (Earth-centered) model - early Greeks thought planets, the Sun, Moon and stars rotated around the earth

Heliocentric (Sun-centered) model - Nicholas Copernicus and Galileo Galilei observed that the Moon revolved around the Earth and that Earth and the other planets revolved around the Sun.

Astronomical units (AUs) - measure distances among the objects in the solar system: 1 AU = 150 million km, the avg distance from Earth to the Sun

Astronomers believe the solar system began 4.6 billion years ago.

- A cloud of gas, ice and dust formed slowly.
- Shock waves (possibly from a supernova, or exploding star) might have caused the cloud to compress.
- Cloud became more dense, rotated faster, heated up, and flattened to form a disc
- Heated material from contracting cloud triggered nuclear fusion, forming the Sun, material left behind became objects of solar system

Objects that orbit the Sun:

planets - a planet must orbit the Sun, have a nearly spherical shape and have a mass much larger than the total mas of all other objects

dwarf planets - spherical-shaped object that orbits the Sun but does not have more mass than the objects in nearby orbits

asteroid - millions of small, rocky objects that orbit the Sun in an asteroid belt; range in size from < 1 meter to several hundred km

comet - made of gas, dust and ice and moves around the Sun in an oval-shaped orbit

meteoroids - debris left by colliding asteroids or dispersing comets

PART 1: Answer the Questions

Quiz: Solar System

Match the term with the proper description

____ 1. planet	a. spherical-shaped object that orbits the Sun but does not have more mass than objects in nearby orbits
____2. dwarf planet	b. planets, Sun, moon and stars rotate around the Earth
____3. meteoroid	c. small, rocky objects that orbit the Sun in a belt
____4. astronomical unit	d. made of gas, dust and ice and moves around Sun in an oval-shaped orbit
____5. asteroid	e. distance among the objects in the solar system
____6. comet	f. moon revolves around Earth and Earth and other planets revolve around the Sun
____7. geocentric model	g. orbits the Sun and has mass much larger than the total mass of all other nearby objects in orbit
____8. heliocentric model	h. debris left by colliding asteroids or dispersing comets

---

PART 2: Summarize

Write a summary (5 sentences or more) answering the question “How did the Solar System come to be?” Use quotation marks (“.....”) to cite evidence from the text. Be sure to indent, use proper grammar, spelling, and punctuation while writing your summary.

Question: Why are planets classified as either inner or outer planets?

THE PLANETS

Planets are classified according to their location in the solar system. Inner planets are those with orbits between the Sun and asteroid belt; outer planets orbit outside the asteroid belt.

Terrestrial planets are made mainly of rocky material and giant gaseous planets are made mainly of ice and gas.

MERCURY - planet closest to Sun

- has no true atmosphere; surface temperatures are extreme
- has many craters and long, steep cliffs

VENUS - second from Sun and similar to Earth in size and mass

- extremely dense atmosphere of clouds causing intense greenhouse
- effect resulting in surface temps between 450°C and 475°C

EARTH - third planet from the Sun

- water exists on Earth as solid, liquid and gas
- atmosphere protects surface from meteors and Sun's radiation

MARS - fourth planet from the Sun

- called the red planet because of the iron oxide that is present in the surface rocks giving them reddish color
- thin atmosphere causing extreme temperatures, strong winds and global dust storms
- has polar ice caps, seasons, and other evidence that water is or was once present

INNER PLANETS

JUPITER - largest planet in solar system; fifth from Sun

- atmosphere mostly hydrogen and helium, many high pressure gas storms with the most notable being the *Great Red Spot*
- has at least 60 moons with four having their own atmosphere

SATURN - sixth planet from Sun, second largest in solar system

- thick outer rings of hydrogen, helium, ammonia, methane and water vapor
- 31 moons, with largest moon, Titan, being larger than Mercury

URANUS - seventh planet from Sun; large and gaseous

- methane in atmosphere gives planet it blue-green color
- has tilted axis of rotation moving around Sun like a rolling ball

NEPTUNE - eighth planet from Sun

- has surface of frozen nitrogen and geysers that erupt nitrogen gas

OUTER PLANETS

PART 1: Answer the Questions

Quiz: The Planets

Circle the term that makes the statement correct.

1. Venus is one of the (inner, outer) planets.
2. The atmosphere on Mars is much (thinner, thicker) than Earth's atmosphere.
3. The gaseous planet with thin, dark rings and has blue-green color from methane is (Neptune, Uranus).
4. (Uranus, Neptune) has tilted axis of rotation moving around the Sun like a rolling ball.
5. The planet with no true atmosphere is (Venus, Mercury).
6. (Venus, Mars) has evidence that water is or was once present.
7. Jupiter is the fifth planet from the Sun with high pressure gas storms, the most notable being (Io, Great Red Spot).
8. (Saturn, Jupiter) has 31 moons with largest moon, Titan, being larger than Mercury.

PART 2: Summarize

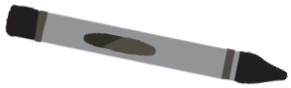
Write a summary (5 sentences or more) answering the question "Why are planets classified as either inner or outer planets?" Use quotation marks ("....") to cite evidence from the text. Be sure to indent, use proper grammar, spelling, and punctuation while writing your summary.

Mesopotamia STATION 1

GEOGRAPHY

1. Using colored pencils color in the map on your "Geography" station worksheet as follows:

BLUE:
- Persian Gulf
- Mediterranean Sea
- Nile River
- Tigris River
- Euphrates River



GREEN: (shade)
- Mesopotamia

YELLOW:
- Land surrounding Mesopotamia

2. Read the following facts about the geography of Mesopotamia.

- The **Fertile Crescent** is a curved region with rich soil in the Middle East.
- It includes Mesopotamia which means "land between the rivers."
- Mesopotamia lies between the Tigris and Euphrates rivers.
  - Each spring, the rivers flooded spreading water and silt across the plain. This left behind rich, fertile soil perfect for farming.
- The region stretched between the Mediterranean Sea on the west and the Persian Gulf on the east.
- The region had fertile, or rich, soil.
  - In the <u>northern part</u> of Mesopotamia, streams and rivers were fed through the Taurus and Zagros mountain ranges.
  - The <u>southern region</u> was dryer and hotter. Therefore, the Tigris and Euphrates rivers were used for irrigation.
    - The Sumerians used technology to irrigate, or supply water to, their crops.
    - They dug canals to bring river water to their fields.
- Today, the Fertile Crescent includes the countries Iraq, Syria, Lebanon, Cyprus, Jordan, Palestine, and Kuwait.

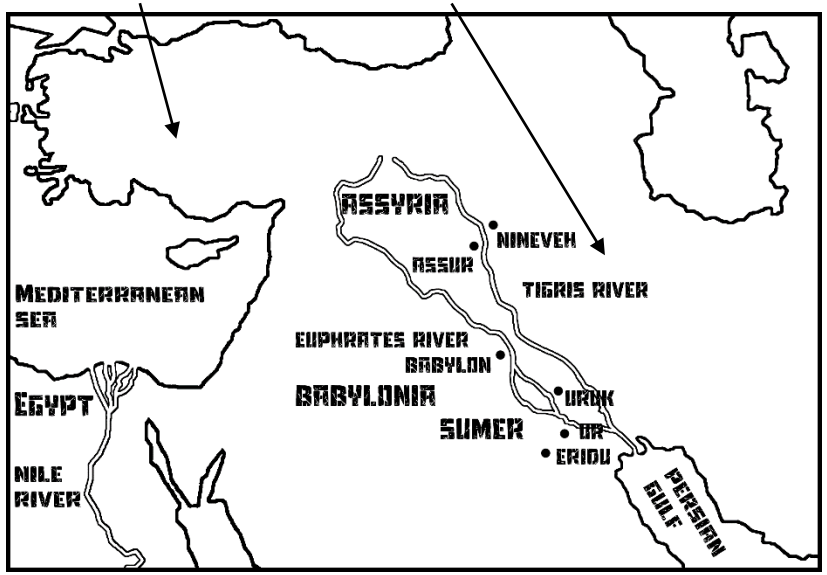
3. Fill in the blanks on your "Geography" station worksheet using information from the facts.
4. Answer the "Think" question on your "Geography" worksheet.

GEOGRAPHY

- The Fertile Crescent is a curved region with _____ in the _____.
- It includes _____ which means "_____."

In the _____ _____ of Mesopotamia, _____ and _____ were fed through the _____ and _____ _____ ranges.

Each _____, the rivers _____ spreading water and silt across the plain. This left behind _____, _____ _____ perfect for _____.



The _____ used technology to _____, or _____, their crops.

THINK! Why did irrigation in Mesopotamia lead to an increase in population? _____
_____
_____

The _____ region was _____ and _____. Therefore, the Tigris and Euphrates rivers were used for _____.

Mesopotamia STATION 4

POLITICS

1. Read about the government of Sumer.

In Mesopotamia, government and religion were closely linked. Sumerians believed that each city was protected by a particular god. The chief god looked after the city's interests. Since it was believed that priests were connected to the gods, they were the most important people in the community. Naturally, priests took on a governing role. However, as cities grew and conflicts arose, priests needed assistance from a leader. So, priests chose leaders to rule the city-states particularly in times of war.

When the war ended, many of the leaders kept control of the city-states. To stay in power, kings worked closely with the priests. Kings tried to respect the priests' powers. In exchange, the priests declared that the king was sent from the gods to rule the city. Gradually kings took over many of the jobs and responsibilities once completed by the priests. Kings hired workers to build temples, roads, and canals. Each king became the city's primary lawmaker and judge.

Some rulers even created a written set of rules or law codes. The earliest known law code was issued around 2100 B.C. by the king of Ur, Ur-Nammu. His law code contained laws about slavery, marriage, and hurting other people.

2. Answer questions about the Mesopotamian government on your "Politics" worksheet. Use complete sentences and details from the text.
3. Be sure to answer the "Think!" question at the bottom of the worksheet.

POLITICS

WHY WERE PRIESTS CONSIDERED SO IMPORTANT?

WHY DID PRIESTS NEED ASSISTANCE FROM A LEADER?

WHAT DID LEADERS DO TO STAY IN POWER?

WHAT DID LEADERS GET IN EXCHANGE?

WHAT DID THE KINGS DO?

WRITE TWO FACTS ABOUT THE LAW CODES.

THINK! How did the kings and priests of Sumer support one another?

Mesopotamia STATION 5

ECONOMY

1. Read about trade in Mesopotamia.

CITY-STATES

- City-states formed in Mesopotamia.
- A **city-state** is an independent state complete with its own government and traditions.
- The city-state included a city, surrounding territory, city walls, and densely packed houses.

TRADE

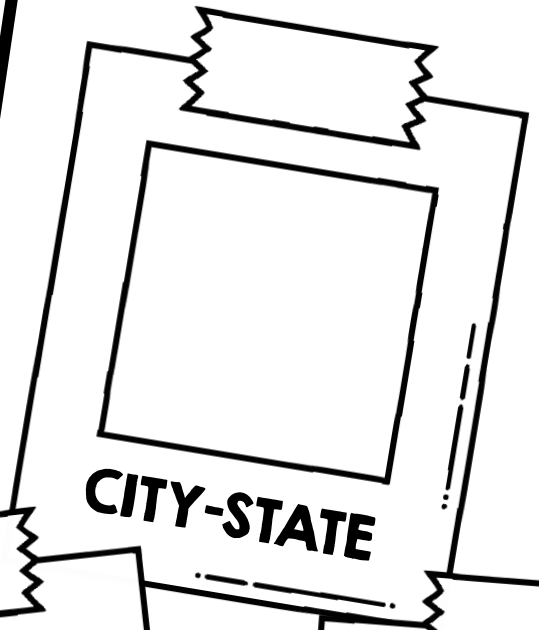
- Each city-state was a station of trade.
- Traders from one city-state would take goods to another city-state to **trade** for materials or goods lacking in their own city-states.
- Traders packed donkeys with goods like cloth and barley. Then, they went on long journeys before they returned with goods like wood, stone or copper.
- Most trade was done through **barter**. Bartering is a trading system in which people exchange goods without using money.

TRADE IMPROVEMENTS

- At first, some traders used major canals and rivers to transport goods. They carried goods on barges (large rafts).
- Eventually, Sumerians invented the wheel so they were able to create carts to carry goods.
- In addition, Sumerians used sails on their boats to make trading easier.

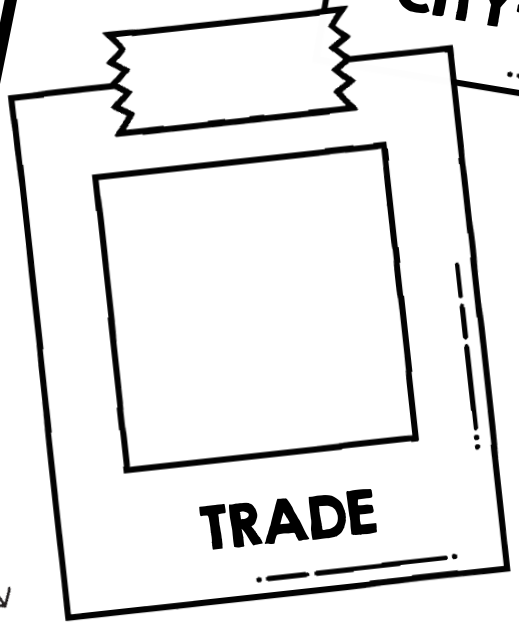
2. Select one fact from each section of information above. Write the fact on your "Economy" worksheet.
3. Then, draw a simple doodle or sketch to illustrate the fact that you wrote down.
4. Be sure to answer the "Think!" question at the bottom of the worksheet.

ECONOMY



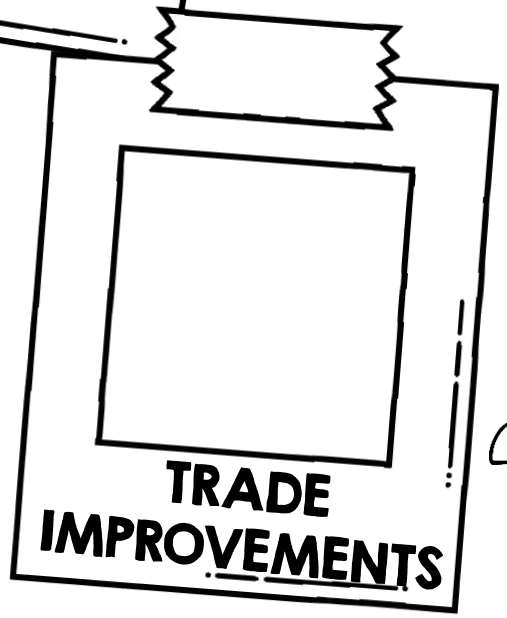
CITY-STATE

FACT:



TRADE

FACT:



TRADE IMPROVEMENTS

FACT:

THINK! How did trade make each city-state's culture richer?