MCMS
6th Grade
NTI Packet
Day 20

Day 20 6th Grade Math

Name _____

Reteaching
12-4

Comparing Rates

Use unit rates to compare two rates that have the same units of measurement.

Daniel painted 9 planks in 6 minutes. Meredith painted 22 planks in 11 minutes. Who painted at a faster rate?

Write each rate as a unit rate.

Daniel's Rate: $\frac{9 \text{ planks}}{6 \text{ min}}$ $= \frac{9 \text{ planks} \div 6}{6 \text{ min} \div 6} = \frac{1.5 \text{ planks}}{1 \text{ min}}$

Meredith's Rate: $\frac{22 \text{ planks}}{11 \text{ min}}$ $= \frac{22 \text{ planks} \div 11}{11 \text{ minutes} \div 11} = \frac{2 \text{ planks}}{1 \text{ min}}$

Since 2 is greater than 1.5, Meredith is the faster painter. The faster rate is 22 planks in 11 min.

Find each unit rate and determine which rate is greater.

1. 51 hits on Jon's website in 3 h or 96 hits on Shana's website in 6 h

_____

_____

2. 330 mi on 15 gal or 240 mi on 10 gal

_____

3. 90 breaths in 6 min or 112 breaths in 8 min

_____

Find each unit price and determine which is a better buy.

4. 20 gallons of gas for $66.00 or 25 gallons of gas for $81.25

_____

5. **Writing to Explain** Earl and Mia danced in a charity fundraiser. Earl raised $275 when he danced for 5 hours. Mia raised $376 when she danced for 8 hours. Which dancer earned more for each hour danced? Explain how you found your answer.

_____

_____

Name _____

Practice
12-4

Comparing Rates

Find each unit rate and determine which rate is greater.

1. 250 mi per 10 gal or 460 mi per 20 gal

_____

2. 1,000 words in 20 min or 2,475 words in 45 min

_____

3. 6 in. of rain in 4 h or 8 in. of rain in 5 h

_____

Find each unit price and determine which is a better buy.

4. 1 lb of apples for $2.15 or 3 lb of apples for $5.76

_____

5. 8 bungee cords for $10.00 or 20 bungee cords for $22.00

_____

6. 5 oz of insect repellant for $6.95 or 14 oz of insect repellant for $19.60

_____

7. Fritz earns $75.60 for each 7-h shift that he works. Which shift pays a higher hourly wage than the wage Fritz earns?

   A $60.30 for a 6-h shift

   B $80.00 for an 8-h shift

   C $36.30 for a 3-h shift

   D $40.40 for a 4-h shift

8. **Writing to Explain** Shaunda said that buying 4 towels for $17 was a better buy than buying 2 towels for $9. She found her answer by doubling the terms in the ratio $\frac{9}{2}$ and comparing the first terms in the ratios. Is she correct? Use unit prices to support your answer.

_____

_____

Basic Skills with Decimals Name_____ ID: Day 10

DO NOT USE A CALCULATOR

Date_____ Period____

Find each sum.

1) 358.9 + 264.9

A) 959.6 B) 623.8
C) 940.1 D) 284.7

2) 42.7 + 356.5

A) 408.6 B) 394.509
C) 399.2 D) 812

3) 270.56 + 249.5

A) 895.66 B) 145.76
C) 593.56 D) 520.06

4) 349.2 + 17.7

A) 251.27 B) 458.5
C) 366.9 D) 760.9

Find each difference.

5) 312 – 69.7

A) 242.3 B) 27.2
C) 522 D) 305.7

6) 414.1 – 122.4

A) 112.61 B) 640.2
C) 457.3 D) 291.7

7) 499.7 – 37.2

A) 340.1 B) 462.5
C) 671.5 D) 669.64

8) 191.8 – 75.7

A) 346.2 B) 116.1
C) 250.8 D) 322.4

Find each quotient.

9) 4.4 ÷ 4

A) 4.4 B) 0.4
C) 1.1 D) 8.4

10) 2.9 ÷ 0.2

A) 14.5 B) 0.58
C) 3.1 D) 1.7

11) 3.2 ÷ 0.4

A) 2 B) 7
C) 8 D) 1.9

12) 1.2 ÷ 0.3

A) 4 B) 0.36
C) 5.7 D) 0.25

Find each product.

13) 8.1 × 2.5

A) 22.144 B) 20.25
C) 29.67 D) 29.85

14) 0.3 × 0.5

A) 0.08 B) 9.75
C) 0.8 D) 0.15

15) 4.6 × 7.548

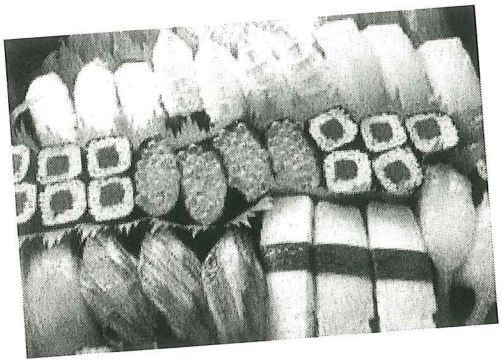
A) 42.0938 B) 12.148
C) 34.7208 D) 43.3208

16) 6.2 × 1.2

A) 10.32 B) 15.54
C) 7.44 D) 0.44

Hook, Line, and Sinker

The world's seafood supply may soon be wiped out, scientists warn.



photos.com

If we don't change the way we treat the ocean, fish may be rare in the future.

Can fish get off the hook? The world's seafood supply may run out by 2048 if a decline in marine species continues at its current rate, according to a report published in the journal *Science.*

An international team of 14 researchers spent four years analyzing fish populations, catch records, and other marine studies. They discovered that 29 percent of all fish species have nearly disappeared. Fish populations have dropped to at least 90 percent below their historical highs.

"If the long-term trend continues, all fish and seafood species are projected to collapse within my lifetime," says research leader Boris Worm of Dalhousie University in Halifax, Canada. "Our children will see a world without seafood if we don't change things."

What's to Blame?

The study cites overfishing and pollution for the **depletion,** or reduction in quantity, of edible seafood. Also contributing to the drop are environmental factors, such as habitat loss and **global warming-** the gradual rise in Earth's average temperature.

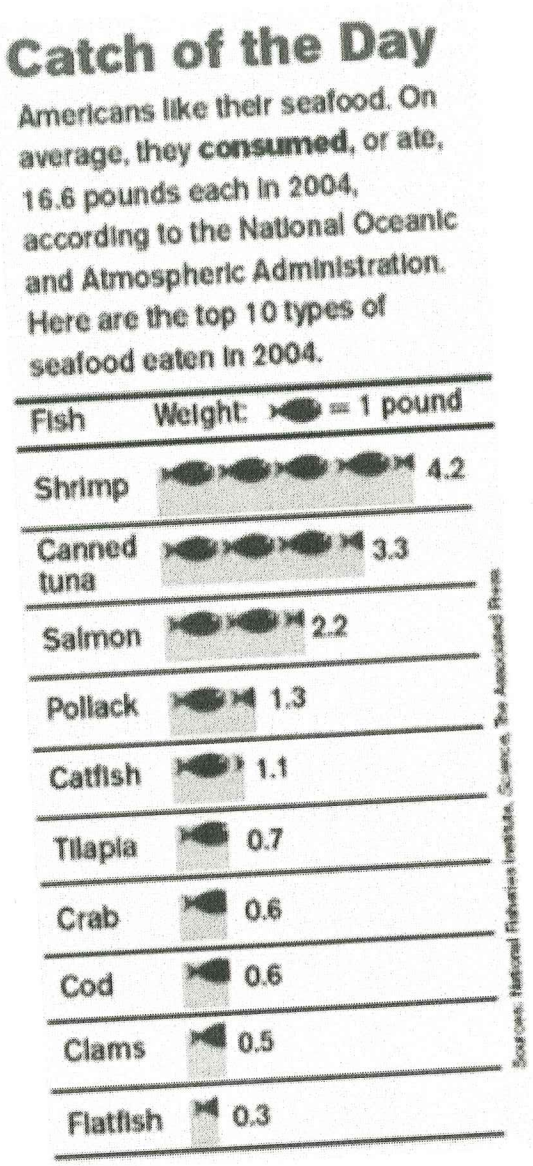
The fishing industry generates $80 billion a year. Some fishing industry experts have questioned the report's dismal predictions. Despite the team's gloomy findings, the authors say it's not too late to reverse the trend. The researchers have called for measures to protect current fish populations, such as having nations set limits on large-scale fishing, reducing pollution, and creating protected areas called **marine reserves.**

Ripple Effect

The loss of ocean life will cause more than just a shortage of seafood. Overfishing can damage the entire ocean ecosystem. An **ecosystem** is a community of organisms functioning as a unit with its environment. The disappearance of one species can throw the entire system out of balance and cause disaster up and down the food chain. If smaller fish disappear, larger creatures would find themselves in big trouble.

Catch of the Day

Americans like their seafood. On average, they consumed, or ate, 15.8 pounds each in 2010, according to the National Oceanic and Atmospheric Administration. Here are the top 10 types of seafood eaten.



WR News

Sources: National Fisheries Institute, Science, The Associated Press

Name: _____ Date: _____

1. According to the passage, the author says measures to protect current fish populations include all the following EXCEPT

A. creating protected areas

B. reducing pollution

C. setting limits on large-scale fishing

D. depleting edible seafood

2. Read these two sentences from the passage:

"The study cites overfishing and pollution for the depletion, or reduction in quantity, of edible seafood."

"The world's seafood supply may run out by 2048 if a decline in marine species continues at its current rate."

Which of the following describes the relationship between these two sentences?

A. The first and second sentences provide both sides of an argument.

B. The first and second sentences describe a two-step process.

C. The first sentence explains the reasons for the second.

D. The first and second sentences make a comparison.

3. Why does the author include the third paragraph ("'If the long-term trend continues . . . .'") in the article?

A. to show how much the fishing industry generates

B. to show how serious the problem is

C. to explain an ocean ecosystem

D. to show how much Americans like seafood

4. Read the following sentence:

"The study cites overfishing and pollution for the depletion, or reduction in quantity, of edible seafood."

In this sentence the word **edible** means

A. fit to be eaten

B. polluted

C. fit to be caught

D. worthless

5. What is the main idea of the article?

A. The fishing industry generates $80 billion a year.

B. Some fishing industry experts have questioned the report's dismal predictions.

C. Overfishing can damage the entire ocean ecosystem.

D. The supply of seafood may run out if the marine population decline continues.

6. What did the team of researchers study in order to reach their findings about fish species?

_____

_____

_____

7. Why are fish important? How can you tell? Give specific examples from the passage that support your answer.

_____

_____

_____

8. Choose the word that best completes the sentence.

_____ researchers analyzed fish populations, catch records, and other studies, they discovered that 29 percent of all fish species have almost disappeared.

A. But

B. From

C. Otherwise

D. When

Name: _____ Date: _____

1. What percentage of all fish species have nearly disappeared?

A. 13 percent

B. 78 percent

C. 29 percent

D. 49 percent

2. The study described in the text was completed by an international team of 14 researchers. What is one thing the study blames for the decline in the world's seafood supply?

A. measures that limit large-scale fishing

B. government laws

C. economic troubles in different parts of the world

D. pollution

3. What is one measure the researchers have called for in order to protect current fish populations?

A. the creation of protected areas called marine reserves

B. the increase of large-scale fishing throughout the world

C. the analysis of fishing populations and catch records

D. the separation of different fish species

4. Read the following sentences:

"Some fishing industry experts have questioned the report's **dismal** predictions. Despite the team's gloomy findings, the authors say it's not too late to reverse the trend."

As used in the text, what does the word "**dismal**" most nearly mean?

A. gloomy

B. favorable

C. unsure

D. long-term

5. Explain how fish populations can be affected by the environment. Use evidence from the text to support your answer.

_____

_____

_____

6th English
NTI Day #20

Directions
Read this story. Then answer questions 43 and 44.

Katerina and her family came to America from Europe with a dream of owning a farm. Katerina, or Trina as she is called by her family, is looking back over the past year.

Excerpt from *Katerina's Wish*

by Jeannie Mobley

My Papa's dream brought us to America. Momma said only a fool believed in dreams, but she knew Papa, so she packed our trunks. And whether she believed or not, that dream swept us out of Bohemia[1] and across the ocean. We'd arrived, in the autumn of 1900 in "a new land for the new century," as Papa put it. By May of 1901, neither the dream nor the country felt new. They both felt old and worn out. As I stood behind our house, staring at a dozen bundles of filthy laundry, I couldn't help but think Momma had been right.

Papa had dreamed of a thriving farm where we would live well. He had imagined acres of green fields, not the dry, barren hills of southern Colorado. He had imagined fresh air and sunshine, the bounty of the fertile land filling our larder and our pockets. Instead, he spent long days underground, toiling in the unwholesome air of a coal mine. And even with all this laundry Momma took on, our pockets stayed empty and our larder was never full. Now that my sisters and I were out of school for the summer, Momma had determined to take on as much washing as we could from the bachelors in town. But it still wasn't likely to mean much money.

"This is too much wash to do in the kitchen," Momma observed from the back door.

"It's too much to do at all," I grumbled.

"If you want to be going back to school in the fall, you'll be needing a new dress," she said. "And the money's got to come from somewhere."

The new term would not start until October, when the schoolmaster returned from one of the other coal camps in the area. But saving money wasn't easy. When we left Bohemia, Papa had thought a year in the coal mines would earn us enough for a farm. We had been here nine months already and had saved almost nothing.

"At least Trina will get a new dress," Aneshka said. She was sitting on the back step, kicking at the dust. "I'll just get her old dress cut down to my size, and Holena will get mine that used to be hers."

[1]**Bohemia:** a district within the Czech Republic

"I don't mind," Holena said quietly from her seat beside Aneshka. She would be starting school for the first time in the fall.

"Mind or not, it can't be helped," Momma said, her mouth setting into a thin, tight line. It was almost the only expression she had worn since coming to America. "And you do have to go to school." School was important. Momma had had few chances to learn English. She relied on my sisters and me to translate for her.

Momma sighed, looking again at the big piles of coal-blackened laundry. "We'll take this load down by the creek. That way we don't have to haul water. Trina, you carry it there, and we'll all join you when chores here are done."

I began hauling tubs and bundles of filthy clothes across camp and down the steep slope to the little creek to the west. It took me four trips back and forth across the shabby town, and each time I returned to the house it seemed Aneshka was working slower and slower at her easy jobs. Holena, who was too little to help carry anyway, was watching Momma knead the week's bread dough. I glared at Aneshka as I gathered the bundles, but she ignored me.

In the creek bottom, I found a wide, grassy spot and built a fire, then arranged stones to balance a tub over the flames. Then I filled the tub with water from the creek. By the time I was done, my sweat-soaked dress clung to my shoulders. My mother and sisters had still not arrived. I wiped the sweat from my forehead with the corner of my apron. Was this all there was to my father's dreams—sweat and coal dust and endless hours of work?

I stretched and looked around. If I was going to spend the day scrubbing filthy clothes, I wasn't going to stay here while I waited for the water to boil. I deserved these few minutes to myself. I wandered along the water's edge, listening to the birds chirp in the low bushes and trying to forget the drudgery of the day ahead.

A short distance downstream, the valley narrowed and turned. The slopes of the valley became steeper, blocking the view of anything around the bend. I had never gone there. For months, I had come only to the creek to draw water. My pace quickened as a flutter of adventure stirred in my heart. I glanced back toward the laundry. My mother and sisters still weren't there. I had time to see what lay beyond the shoulder of land.

Around the bend, I stopped in amazement. The creek spread out into a still pool. At its edge, an ancient cottonwood tree leaned out, its massive branches reaching across until they shaded the creek bottom from slope to slope. For a moment I thought I might be dreaming. I had never seen this tree before.

43 What is a central idea of "Excerpt from *Katerina's Wish*"? Use **two** details from the story to support your response.

44 How does Trina's mood change from the beginning to the end of "Excerpt from *Katerina's Wish*"? Use **two** details from the story to support your response.

Directions

Read this story. Then answer question 45.

On her first venture into the woods of her new home town, Taylor makes an unexpected discovery.

Excerpt from *Summer Hawk*

by Deborah Savage

It rose above everything, a giant white crack against the blue sky. Solitary in the middle of the clearing, dwarfing the forest growth, the white tree was split down the middle. Black, charred wood contrasted with the pale bark so distinctly it looked as though someone had painted it.

The tree had been dead a long time before the lightning struck last night. No leaf clung to the maze of branches. Half of the tree rose into the sky fifty or sixty feet, every twig etched in white against searing blue. The other half lay smashed on the ground, flattening the grass for an area the size of a small house. Whole, the trunk must have been ten feet in diameter. I never knew until that moment how one could stand truly frozen with awe.

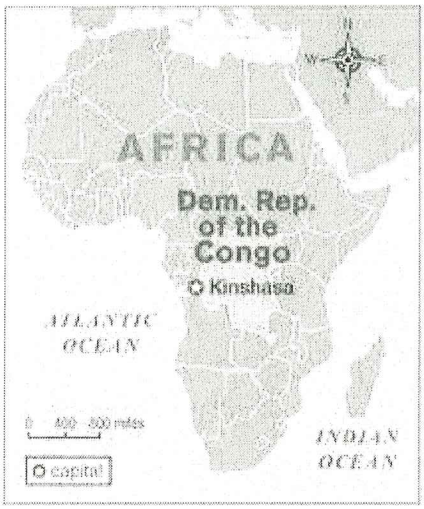
And with the awe came also sorrow. I would never see this tree whole. I touched the outer twigs lightly with my fingertips. Perhaps I alone had seen the moment of this tree's fiery division. I pushed deeper in until I was laced around by the branches. There was a sudden piercing shriek so close to me I gasped and stumbled back.

The shrieking came from the impenetrable center of the broken branches. It was impossible to see anything through the latticework of tangled twigs. The screeching increased frantically whenever I moved. Angry . . . and afraid. I worked my way around the outer branches and climbed cautiously up on the broken half of the trunk. My hands turned black from the burned wood, and I felt the warmth. I was touching lightning.

I crawled out as far as I could and stood up, holding tight to a protruding branch. I peered down into the mass below me, and there was the ugliest bird I had ever seen.

It was huge, bigger than a chicken, covered in soot-matted tufts of gray down. Clumps of feathers stuck out unevenly on the wings and tail. Its head was almost bare, comprised of not much more than two great, fierce-browed eyes and a curved beak so sharp and powerful-looking I was sure it could take my finger off. The beak was open so wide I could see the tongue, and the bird lunged awkwardly at me while it screamed. It clung precariously to a branch with oversized, yellow, taloned feet. When I moved closer, the bird lurched at me so violently it toppled, flapping and squawking, into the tangle below. It clawed its way back onto the branch and continued to scream at me.

New Lives for Old Buses



Leigh Haeger

What happens to old school buses when they can no longer safely carry kids to school? Most go to junkyards to be converted to scrap metal. But a few of the old vehicles find new lives-in the center of Africa. Most of those buses end up on the streets of Kinshasa, the capital of the Democratic Republic of the Congo (Congo).

The Kinshasa buses are that familiar yellow color, which makes them stand out in the city's swirling traffic, but the buses don't look at all as they did in the United States. Their blinking taillights are almost all missing or broken. They don't obey traffic rules and often race around the city at breakneck speeds. The buses vie, or compete, with honking motorcycles, cars, trucks, and other vehicles for space on the road. They chug and rattle along, packed with people carrying loads of preserved fish, powdered milk, beans, onions, and cassava. Cassava is a starchy, potato-like root vegetable that is popular in many Congolese dishes.

Kinshasa businesspeople love the old, dented yellow buses, which they buy from American companies, because the vehicles are sturdy, reliable, and inexpensive. A used bus sells for about $2,000 in the Congo. A new bus is more expensive. In the United States, a new school bus (with all its lights working) costs about $80,000.

The fare to travel across the city is usually the equivalent of 30 U.S. cents. "Transport is a big problem in the city," says passenger Bruce Kingambo. "The yellow buses help regular people get around."

Name: _____ Date: _____

1. In the Congo, yellow school buses carry around all of the following EXCEPT

A. preserved fish
B. schoolchildren
C. people
D. powdered milk

2. How does the author describe the school buses used in the Congo?

A. beautiful but expensive
B. new, shiny, and clean
C. old, dented, and sturdy
D. old, broken, and useless

3. Which of the following conclusions about yellow school buses is supported by the passage?

A. Yellow school buses are a big help to people in the Congo.
B. The people in the Congo don't like yellow school buses.
C. Yellow school buses will no longer be converted to scrap metal.
D. People in the Congo want to paint the buses a different color.

4. Read this sentence from the passage:

"Kinshasa businesspeople love the old, dented yellow buses, which they buy from American companies, because the vehicles are sturdy, reliable, and inexpensive."

In this sentence, the word **reliable** means

A. old-fashioned
B. glamorous
C. troubled
D. dependable

5. The primary purpose of this passage is to describe

A. why most old school buses are converted to scrap metal

B. how old yellow school buses are helping people in the Congo

C. the importance of obeying traffic rules and wearing a seatbelt

D. what life is like growing up in the Democratic Republic of the Congo

6. What is the capital of the Congo?

7. Why don't people in the Congo buy new school buses instead of used buses? How do you know?

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

Most old school buses end up in junkyards, _____ some are sold to people in the Congo.

A. but

B. on

C. for

D. to