

MCMS
6th Grade
NTI Packet
Day 16

Day 16

6th Grade Math

Name _____

Reteaching
19-3

Mean

The mean is the sum of all the values in a set divided by the number of items in the set. The mean is also called the average.

How to find the mean of a set of data:

Eduardo surveyed 7 of his friends to find out how many books they read during the month. The frequency table hows the data. What is the average number of books read by Eduardo's friends?

Book Reading	
Friend	**Number of books read**
Jean	2
Raul	3
Sally	8
Jonathan	5
Haley	6
Kristen	3
Owen	1

1. Add the number of books read by each friend. $2 + 3 + 8 + 5 + 6 + 3 + 1 = 28$
2. Divide the sum of by the number of friends. $\frac{28}{7} = 4$
3. Use the average to answer the question. Eduardo's friends read an average of 4 books during the month.

1. Find the mean of this set of data: 241, 563, 829, 755. _____
2. This frequency table shows the number of silver medals won by American athletes in Summer Olympic Games between 1972 and 2000. What is the mean of this set of data?

   _____

US Silver Medals Summer Olympics Games	
Year	**Medals**
2000	24
1996	32
1992	34
1988	31
1984	61
1980	0
1976	35
1972	31

3. **Estimation** What is the approximate average of these three numbers: 9, 18, and 31? _____
4. **Explain It** Explain how you would find the mean of this set of data: 4, 3, 5.

   _____

   _____

Name _____

Practice
19-3

Mean

Find the mean of each set of data.

1. 2, 5, 9, 4 _____
2. 44, 73, 63 _____
3. 11, 38, 65, 4, 67 _____
4. 3, 6, 3, 7, 8 _____
5. 120, 450, 630 _____
6. 4.2, 5.3, 7.1, 4.0, 11.9 _____

Gene's bowling scores were as follows: 8, 4, 10, 10, 9, 6, 9.

7. What was his average bowling score? _____
8. If Gene gets two more strikes (scores of 10), what is his new average? _____
9. **Reasoning** Krishan wants his quiz average to be at least 90 so that he can get an A in the class. His current quiz scores are: 80, 100, 85. What does he have to get on his next quiz to have an average of 90?

   A 85 **B** 90 **C** 92 **D** 95

10. **Explain It** Suppose Krishan's teacher says that he can drop one of his test scores. Using his test scores of 80, 100, and 85, which one should he drop, and why? What is his new average?

    _____

    _____

Basic Skills with Decimals Name_____ ID: Day 16

DO NOT USE A CALCULATOR

Date_____ Period____

Find each sum.

1) 53.1 + 251.7

A) 304.8 B) 382.8
C) 766 D) 126.9

2) 212 + 18.336

A) 201.545 B) 74.336
C) 112.836 D) 230.336

3) 459.7 + 335.2

A) 794.9 B) 688.1
C) 1013.7 D) 842.31

4) 369.4 + 22.32

A) 391.72 B) 470.52
C) 147.02 D) 465.62

Find each difference.

5) 324 – 200.6

A) 424 B) 342.1
C) 283.32 D) 123.4

6) 114.8 – 19.2

A) 58.7 B) 95.6
C) 56.3 D) 355.5

7) 287.2 – 235.6

A) 51.6 B) 425.7
C) 321.4 D) 233.6

8) 375 – 143.2

A) 184.42 B) 35.8
C) 207.6 D) 231.8

Find each quotient.

9) 4.2 ÷ 2

A) 2.2 B) 5.5
C) 7.1 D) 2.1

10) 6.3 ÷ 0.3

A) 6 B) 7.9
C) 1.1 D) 21

11) 4.4 ÷ 1.1

A) 5.2 B) 0.25
C) 4 D) 4.91

12) 3.4 ÷ 6.8

A) 10.2 B) 0.3
C) 7.5 D) 0.5

Find each product.

13) 0.3 × 6

A) 2.2 B) 1.8
C) 6.6 D) 6.3

14) 7.8 × 9

A) 76.34 B) 60.3
C) 26.95 D) 70.2

15) 0.8 × 1.1

A) 1.58 B) 1.9
C) 0.88 D) 10.68

16) 0.4 × 7.92

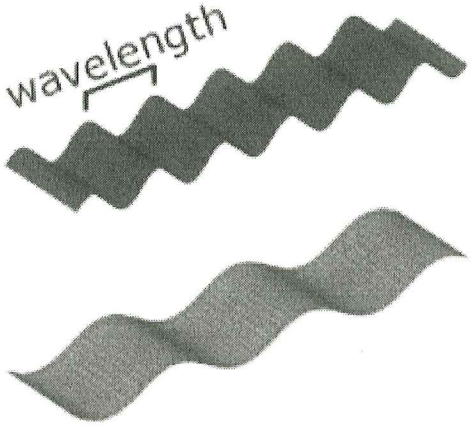
A) 3.168 B) 24.05
C) 8.32 D) 6.068

Why Is the Sky Blue?

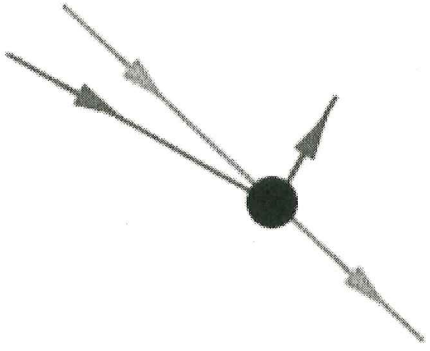
by Dr. Hany Farid

Gas molecules in the atmosphere scatter, in all directions, the short wavelength light that appears blue to us. Longer wavelength light is largely unaffected as it passes through the atmosphere. As a result, when you look at the sky, you see blue everywhere. Read on for a more detailed explanation.

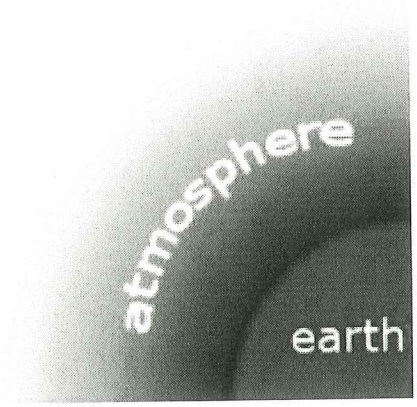
Fact 1. Light travels in waves. The light's wavelength determines its color. Short wavelength light, for example, appears blue, and long wavelength light appears red.



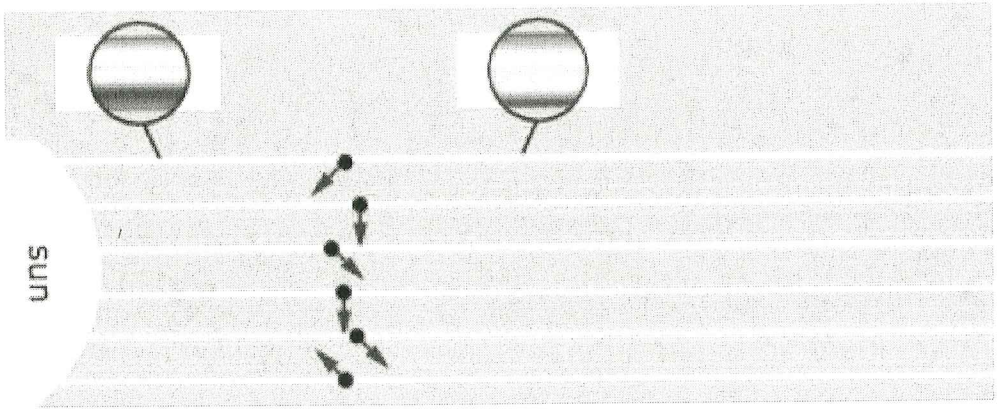
Fact 2. When light strikes particles that are larger than its wavelength, the light's path may be altered. When light strikes particles that are smaller than its wavelength, the light continues to travel unaffected.



Fact 3. The atmosphere contains many particles and gases, mainly nitrogen and oxygen.



Sunlight is composed of light of many different wavelengths. Longer wavelength light appears red, orange, and yellow, while shorter wavelength light appears blue, indigo and violet. The gas molecules in the atmosphere scatter, in all directions, shorter wavelength light (e.g., blue). The longer wavelength light (e.g., red) is largely unaffected by the atmosphere. As a result, when you look at the sky, you see the blue portion of the sun's light being scattered by the atmosphere. If you were to look at the sky while standing on the moon, you would see a very bright star surrounded by complete darkness. This is because the moon has no atmosphere and so sunlight is not scattered.



You might wonder why the sky is not the color of the even shorter wavelength violet. The primary reason for this is that our eyes are better at detecting blue light than they are at detecting violet light.

Name: _____ Date: _____

1. What color might short wavelength light appear to us?

A. green

B. blue

C. red

D. orange

2. This text describes what happens when light hits particles of different sizes. Why might the text include this description?

A. to persuade the reader to agree with the author about how light and particles interact

B. to present evidence for different views about how light and particles interact

C. to inform the reader about how light and particles interact

D. to compare and contrast two ideas about how light and particles interact

3. When light strikes particles that are larger than its wavelength, the light's path may be altered. The gas molecules in Earth's atmosphere affect the path of light with a shorter wavelength (blue light). Based on this evidence, what conclusion can be drawn about the size of the gas molecules in Earth's atmosphere?

A. The gas particles are smaller than the wavelength of blue light.

B. The gas particles are larger than the wavelength of blue light.

C. The gas particles are larger than the wavelength of red light.

D. The gas particles are smaller than the wavelength of violet light.

4. If Earth had no atmosphere at all, what would the sky mostly look like?

A. It would look mostly red, with a very bright star.

B. It would look mostly violet, with a very bright star.

C. It would look mostly blue, with a very bright star.

D. It would look mostly dark, with a very bright star.

5. What is the main idea of this text?

A. Long wavelength light appears to us as red, while short wavelength light appears to us as blue.

B. The main reason why the sky looks blue is that our eyes are better at detecting blue light than light of other colors.

C. The sky appears blue because gas molecules in the atmosphere scatter the wavelength of light that appears blue to us.

D. The atmosphere contains many particles and gases, mainly nitrogen and oxygen.

6. Why might the author have chosen to include diagrams in this text?

A. to provide interesting information that does not have to do with the main idea of the text

B. to distract readers from the discussion of some of the technical concepts in the text

C. to suggest that the information in the text can be interpreted in different ways

D. to highlight and clarify concepts that are important to understanding the main idea of the text

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

The gas molecules in the atmosphere scatter shorter wavelength light, _____ the longer wavelength light is largely unaffected by the atmosphere.

A. but

B. similarly

C. then

D. therefore

8. What happens to light's path when it strikes particles that are larger than its wavelength?

_____

_____

_____

9. Why might the path of longer wavelength light (red light) be mostly unaffected by Earth's atmosphere? Support your answer with evidence from the text.

10. Imagine that you are standing on another planet looking at the sky in the daytime. The planet has an atmosphere, but the sky looks dark. What about the particles in that planet's atmosphere might cause the sky to look dark, instead of blue like Earth's sky? Support your answer with evidence from the text.

6th English
NTI Day #16

Directions
Read this poem. Then answer questions 22 through 28.

Twilight Calm

by Christina Rossetti

Oh, pleasant eventide!
Clouds on the western side
Grow grey and greyer hiding the warm sun:
The bees and birds, their happy labours done,
Seek their close nests and bide.

Screened in the leafy wood
The stock-doves sit and brood:
The very squirrel leaps from bough to bough
But lazily; pauses; and settles now
Where once he stored his food.

One by one the flowers close,
Lily and dewy rose
Shutting their tender petals from the moon:
The grasshoppers are still; but not so soon
Are still the noisy crows.

The dormouse squats and eats
Choice little dainty bits
Beneath the spreading roots of a broad lime;
Nibbling his fill he stops from time to time
And listens where he sits.

From far the lowings come
Of cattle driven home:
From farther still the wind brings fitfully
The vast continual murmur of the sea,
Now loud, now almost dumb.

The gnats whirl in the air,
The evening gnats; and there
The owl opes broad his eyes and wings to sail
For prey; the bat wakes; and the shell-less snail
Comes forth, clammy and bare.

Hark! that's the nightingale,
Telling the selfsame tale
Her song told when this ancient earth was young:
So echoes answered when her song was sung
In the first wooded vale.

We call it love and pain
The passion of her strain;
And yet we little understand or know:
Why should it not be rather joy that so
Throbs in each throbbing vein?

In separate herds the deer
Lie; here the bucks, and here
The does, and by its mother sleeps the fawn:
Through all the hours of night until the dawn
They sleep, forgetting fear.

The hare sleeps where it lies,
With wary half-closed eyes;
The cock has ceased to crow, the hen to cluck:
Only the fox is out, some heedless duck
Or chicken to surprise.

Remote, each single star
Comes out, till there they are
All shining brightly: how the dews fall damp!
While close at hand the glow-worm lights her lamp
Or twinkles from afar.

But evening now is done
As much as if the sun
Day-giving had arisen in the East:
For night has come; and the great calm has ceased,
The quiet sands have run.

22 What does **most** of the poem describe?

A the sounds of evening

B animals preparing for nightfall

C creatures hunting for food at night

D the way the weather changes at sunset

23 Read lines 1 through 3 of the poem.

Oh, pleasant eventide!
Clouds on the western side
Grow grey and greyer hiding the warm sun:

Which words **best** describe the tone that the poet creates at the beginning of the poem?

A concern for warmth

B surprised alarm at day's end

C enthusiasm for the time of day

D disapproval of the weather pattern

24 Read lines 6 and 7 of the poem. Then read this dictionary entry for "screen."

> **screen** *v.* **1.** to provide with a means to exclude insects **2.** to shelter or conceal from view **3.** to separate or sort **4.** to use a method to determine suitability for a task

Which definition **best** matches the meaning of "screened" as it is used in lines 6 and 7?

A definition 1

B definition 2

C definition 3

D definition 4

25 Which lines provide the **best** evidence that events in nature are repeated over many years?

A "The very squirrel leaps from bough to bough
But lazily; pauses; and settles now
Where once he stored his food." (lines 8 through 10)

B "Nibbling his fill he stops from time to time
And listens where he sits." (lines 19 and 20)

C "Hark! that's the nightingale,
Telling the selfsame tale
Her song told when this ancient earth was young:" (lines 31 through 33)

D "Through all the hours of night until the dawn
They sleep, forgetting fear." (lines 44 and 45)

26 Which lines of the poem **best** demonstrate a gradual change that occurs during the evening?

A lines 11 through 13

B lines 16 through 20

C lines 44 and 45

D lines 54 and 55

27 Which word **best** describes most of the evening activity mentioned in the poem?

A busy

B lonely

C strained

D cooperative

28 Which lines **best** show that the night is different from the evening?

A lines 1 through 5

B lines 11 through 15

C lines 26 through 30

D lines 56 through 60

Early People in the Central American Land Bridge

by James Folta



People have been living in Central and South America for many, many years now. How did ancient people live in this area thousands of years ago? Archaeologists studying the area of the Central American land bridge have been working to answer this question.

What is the Central American land bridge? It is the land that is now the countries of Costa Rica and Panama. Like a modern bridge over a river, this land bridge was used by animals and people to travel back and forth. This Central American land bridge connects the northern land that is now Nicaragua, Mexico, and so on to the southern land that is now Colombia, Brazil, and other South American countries.

People who were already living in North America traveled down and across this land bridge. Scientists think they traveled there around 11,000 BC. They probably were following large animals that they hunted and ate. These people would have traveled on foot, following the herds of animals. They had no permanent houses. They would pack up their things and bring them along as they hunted. Their homes were like tents and were very easy to take down and put up. Archaeologists can tell these people traveled via the land bridge because they have found similar arrowheads and tools in both the land bridge and in areas further north and south.

These tools are the main record of people's movement and settlement. Ancient people at this time made their tools, by hand, out of stone. Later, they used obsidian, which is a dark glass formed in volcanoes. They made small hand axes, arrowheads and spearheads by knapping. Knapping is when

you hit one stone with another to break off little pieces. Slowly, you can shape the stone however you want. When certain stones (like obsidian or flint) break, they leave very sharp edges, which can be used to cut.

Archaeologists don't find evidence of these tools very often. When so much time passes, natural things like rain, dirt and trees destroy and bury them. Scientists also think the oceans were lower back then. This means there once was more land that is now underwater. Probably there is more evidence of people living in the area under the sea off the coasts of Costa Rica and Panama.

It is hard to tell when people stopped traveling along the land bridge and began living there. One clue is when people began farming. On the land bridge, this was around 9,000 and 7,000 BC. In Panama, scientists have found evidence that people were growing bottle gourds, squash, and a few other things around that time. These would be in small gardens, not big farms. People weren't eating just the plants they grew at this time. They would gather fruits and nuts from the forest, hunt deer, fish for crabs and fish, and eat from their gardens.

Archaeologists now think that some forests were actually farms too, which makes it harder to determine when hunting and gathering stopped. Places we once thought were wild were perhaps maintained by ancient people. This would be like an apple orchard. It looks like a forest, but has actually been planted and taken care of by humans-you wouldn't know it was a farm for apples unless you looked more closely. The same thing probably happened on the Central American land bridge and elsewhere.

Slowly, people built more permanent houses on the land bridge. The first small village archaeologists have found is in Costa Rica, in a place called Tronadora Vieja. There are round pole and thatch houses, which are simple huts made out of long tree branches covered in leaves and grasses. These houses date to 3,800 BC and were destroyed when a nearby volcano exploded and buried them in ash. Scientists also found the earliest maize kernels on the land bridge, as well as metates. Metates are small stone tables used to grind maize into powder. This was used in cooking and baking, like flour. Nearby at Laguna Zoncho, archaeologists found a bigger village, with more houses and farms. People started living here after Tronadora Vieja, around 3,240 BC.

People were still hunting and gathering at this time, though. Why did some people settle down to farm and some people continue moving around? There are lots of ideas, but on the land bridge, archaeologists think it had to do with the amount of rain and water in the area. Places that had less water made it harder for the forests to remain full of fruits and animals. So in these dry areas, people started to farm more, build houses and stay put. So some groups kept hunting and gathering while others were starting to build and farm.

Archaeologists are still studying this part of the world. Hopefully in the years to come, we can find out more about how ancient people lived on the Central American land bridge.

Name: _____ **Date:** _____

1. What is the Central American land bridge?

A. a manmade bridge between North and South America

B. the ancient name for the country of Mexico

C. the land that is now the countries of Costa Rica and Panama

D. the flooded strip of land between Central and South America

2. What does the author describe in the passage?

A. the Central American land bridge and the people who traveled it

B. the gradual rise in ocean level on the Central American land bridge

C. the species of animals that crossed the Central American land bridge

D. the cultures of North American peoples before 11,000 BCE

3. Why do scientists think that people traveled the land bridge around 11,000 BCE?

A. because scientists found fossilized human footprints in the land bridge

B. because scientists found similar arrow heads and tools in the land bridge and in areas further north and south

C. because scientists found remains of tent-like residences in the land bridge

D. because scientists found evidence of cattle herding in the land bridge

4. People in Panama started farming between 9,000 and 7,000 BCE but did not rely on it as their only food source. What evidence from the text supports this conclusion?

A. "Places we once thought were wild were perhaps maintained by ancient people."

B. "One clue is when people began farming. On the land bridge, this was around 9,000 and 7,000 BCE."

C. "Scientists have found evidence that people were growing bottle gourds, squash, and a few other things around that time. These would be in small gardens, not big farms."

D. "It is hard to tell when people stopped traveling along the land bridge and began living there."

5. What is this passage mostly about?

A. the rise of agriculture in South America from 9,000 BCE to today

B. how global warming has affected wildlife on the Central American land bridge

C. the development of civilization on the Central American land bridge

D. flint knapping and its importance in ancient Central American culture

6. Read the following sentences: "Places we once thought were wild were perhaps **maintained** by ancient people. This would be like an apple orchard. It looks like a forest, but has actually been planted and taken care of by humans-you wouldn't know it was a farm for apples unless you looked more closely."

As used in the passage, what does "**maintained**" mean?

A. kept in order

B. planned

C. destroyed

D. seeded

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

The first people to travel the Central American land had no permanent dwellings; _____ they lived in tents that were easy to take down and put up as they moved around.

A. moreover

B. specifically

C. therefore

D. instead

8. What is knapping and for what did ancient people use it?

9. Why don't archeologists often find evidence of tools in the Central American land bridge? Provide two examples from the text.

10. How can archeologists tell when people started to settle on the land bridge, as opposed to just moving across it? Support your answer with evidence from the text.