Cohen Middle School
100 Robinwood Avenue
Elmira Heights, NY 14903
734-5078

Name: _____ **Date: November 21, 2019**_____

Math:

Ratios & Proportions

nb 55 & 56 bmuk wksht & quiz

Social Studies:

Religion in Egypt

HW: King Tut

ELA:

Daily Warm Up
Finish Narrative
Precading Activity
Begin reading novel choice

Science

① Warm-Up Vocab Match (see inside The LeBron James Hw)
② Finish Lab pgs 13 + 15
How are friction and motion related?
③ Hw: Finish reading LeBron James Article + Study

Computer Apps/ Technology

Newtons 1st / 3rd Law + Vocab for FRIDAY QUIZ

Unit 7: Finding the Unknown

Name_____ Date_____

Aim: SWBAT use proportions to solve word problems.

Key Points/Vocabulary:

- Read the word problem carefully and identify the two things that are being compared.
- Set up a proportion box and label each row
- Re-read the problem and place the given information in the correct places of the proportion box
- Solve the proportion for the missing information

Examples/Visuals:

Word Problem	Proportion	Solve
At a picnic, hamburgers and hot dogs were consumed in the ratio of 5 to 3. If 30 hamburgers were consumed, how many hot dogs were consumed?	Label / Proportion box: burger: 5, 30; dogs: 3, X $\frac{5}{3} = \frac{30}{x}$	$5x = 30 \cdot 3$ $5x = 90$ $90 \div 5 = x$ $x = 18$ hot dogs Check: $5x = 90$, $5 \cdot 18 = 90$, $90 = 90$ ✓
At the Stevenson school, chocolate milk is an option for lunch on Friday. There are three chocolate milks sold for every white milk. If 120 containers of chocolate milk were sold on Friday, how many containers of white milk were sold?	Label / Proportion box: Choc: 3, 120; white: 1, X $\frac{3}{1} = \frac{120}{x}$	$3x = 120 \cdot 1$ $3x = 120$ $120 \div 3 = x$ $x = 40$ white milks Check: $3x = 120$, $3(40) = 120$, $120 = 120$ ✓
At the party the boy-girl ratio was 5 to 3. If there were 30 boys, how many girls were there?	Label / Proportion box: boy: 5, 30; girl: 3, X	$5x = 30 \cdot 3$ $5x = 90$ $90 \div 5 = x$ $x = 18$ girls Check: $5x = 90$, $5(18) = 90$, $90 = 90$ ✓

Name _____

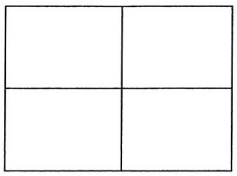
1. Mrs. Testone can read 1,500 pages in 12 days. If she reads the same amount of pages each day, how many pages can Mrs. Testone read in 3 days?

Part _____ **Part** _____ **Whole** _____

Label **Work/Solution** **CHECK**

_____

_____



Target Statement _____.

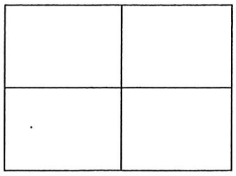
2. The automobile insurance company receives 18 phone calls in 6 hours. How many calls do they receive in 11 hours?

Part _____ **Part** _____ **Whole** _____

Label **Work/Solution** **CHECK**

_____

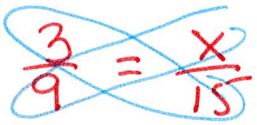
_____



Target Statement _____.

STEPS FOR SOLVING PROPORTIONS

1. Set the ratios up with an = sign between them



2. Cross Multiply (keep the variable*(letter)* set up on the left side) $9x = 3 \cdot 15$

3. Rewrite the new equation

4. Simplify (solve what can be solved) and rewrite the simplified equation $9x = 45$

5. Rewrite the equation with division and the variable on the right side of the = $45 \div 9 = x$

6. Solve for the unknown (variable) $x = 5$

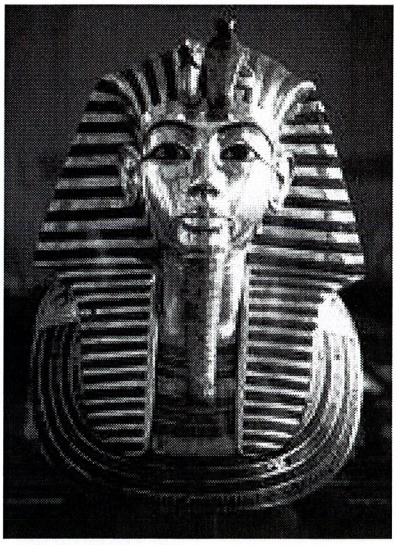
7. CHECK!!! Rewrite step 4 (the simplified equation) — Check: $9x = 45$

8. Substitute the value you solved for $9(5) = 45$

9. Simplify and make sure BOTH SIDES of the = match $45 = 45$ ✓

Name: _____ edHelper

The Mummy of King Tutankhamun



The sands of Egypt hid a secret tomb for more than three millennia. A man named Howard Carter wanted to find the tomb of a pharaoh of Egypt named Tutankhamun. Carter hunted for several years. Just when he was about to give up, he found it.

King Tutankhamun, better known to us today as "King Tut," was a pharaoh during the New Kingdom. He died around 1323 B.C. In 1922, the tomb was opened for the first time in three thousand years. It had not been looted by modern tomb raiders. When Carter found it, he first peeked through a hole punched through the tomb's wall. Someone asked, "Can you see anything?" Carter said, "Yes, wonderful things."

The treasures inside the boy king's tomb were described as "marvelous." His chariot waited near him to carry him to the afterlife. Also inside the tomb were lamps, beautiful furniture, musical instruments, and board games. There was a small chair the king had used when he was a child. The tomb held more than one hundred twenty items, including clothes, fans, and vases.

Tut's mummy was elaborate. His fingers and toes were given special gold covers with the fingernails and toenails marked on them. He wore sandals made of gold. The portrait mask that covered the mummy's face is thought to be an exact likeness of the boy king. It was made from gold and inlaid with precious stones and colored glass. It weighed twenty-two pounds! The false beard below his chin and the uraeus, a symbol representing Upper and Lower Egypt, on his forehead were symbols of his royal power.

King Tut's mummy had three coffins, and one of them was made of solid gold. These were placed inside a stone sarcophagus, which was placed inside four nested shrines. Each of the shrines was made of wood gilded with gold. Each was lavishly decorated. The whole thing weighed more than 3,000 pounds!

King Tutankhamun was not an important ruler of Egypt. He did not add land or riches to his country. He was pharaoh for only about nine years because he died at a young age. He lived to be only nineteen or twenty years old. But today, he is probably the best known of all the Egyptian pharaohs. He is famous because of his tomb and the treasures it held. The discovery in 1922 captured the imagination of the world. Newspapers shared pictures and stories of the incredible finds with people around the world. Rumors of the "curse of the pharaohs" helped turn King Tut into a media sensation. The public had an avid interest in learning everything about the boy king's tomb and the treasures within it. The treasures gave clues about a boy king's life in ancient Egypt more than three thousand years ago.

Name: _____ edHelper

The Mummy of King Tutankhamun

Questions

_____ 1. King Tutankhamun was the most important ruler of Egypt.

A. true
B. false

_____ 2. Using clues in the text and what you know about prefixes, what do you think "millennia" means in paragraph 1?

A. one thousand years
B. one hundred meters
C. one hundred years
D. one hundred miles

_____ 3. *The portrait mask that covered the mummy's face is thought to be an exact likeness of the boy king.* Based upon this sentence from the story, which adjective best describes the mummy's mask?

A. probable
B. impractical
C. lifelike
D. unrealistic

4. How old was King Tutankhamun when he died?

_____

_____

_____ 5. King Tut's sarcophagus was made of _____.

A. gold inlaid with jewels
B. solid gold
C. stone
D. wood gilded with gold

_____ 6. What did the sarcophagus hold?

A. the Book of the Dead
B. lamps and furniture
C. three coffins and Tut's mummy
D. Tut's heart and other organs

(Answers) Science 6

This is why professional basketball players appear to have no fat on their bodies at all. Fat does not store energy as effectively as muscle, but it still contributes to one's body weight. Fat on a basketball player is equal to wearing lead weights around their hips during a game. Obviously, this would hinder a player's performance, especially his ability to dunk.

Physicists have spent time thinking about the physics of dunking. To remain in the air for one second, they say, one would have to have a vertical leap of 4 feet, which is higher than pretty much any basketball player of all time. One exception is Michael Jordan, who is believed to have the highest vertical leap—48 inches, or 4 feet—of any professional basketball player. Michael Jordan was just 6 feet, 6 inches tall—average for an NBA player—but his vertical leap placed his head about 6 inches above the rim.

That one of the best basketball players in history also has the highest vertical leap is no coincidence. Michael Jordan's body was strong, stable, and proportioned in such a way that the force he pushed onto the ground placed him above the rest. He was one of the best overall athletes in the game, and his slam-dunking ability was an indication of his prowess.

From basketball players like LeBron James to Michael Jordan, it may seem like they are bending the rules of physics and gravity when they dunk a basketball. On the contrary, they are able to perform crowd-rousing dunks because of these rules.

Vocabulary Practice: Match the word with the definition. Then check your answers using your Force & Motion #1 Vocabulary List. ~~A~~ Warm-up done in class

A. Force **B. Compresses** **C. Spring scale** **D. Weight** **E. Newton(N)**
F. Mass (g) **G. Friction** **H. Gravity** **I. Interaction**

F MASS The amount of matter "stuff" in an object

Spring scale A simple piece of technology designed to measure force.

Weight the downward force of gravity on a mass

Compressed forced (pushed) into a smaller space; (when the mass pulls the spring down, it is being...

Newton The common unit for measuring force (N)

A FORCE An interaction between objects; a push or pull

G FRICTION A force acting between surfaces in contact; that acts to resist motion

(write the definition of the unused words here):

H. **Gravity:** The force of attraction between any two objects

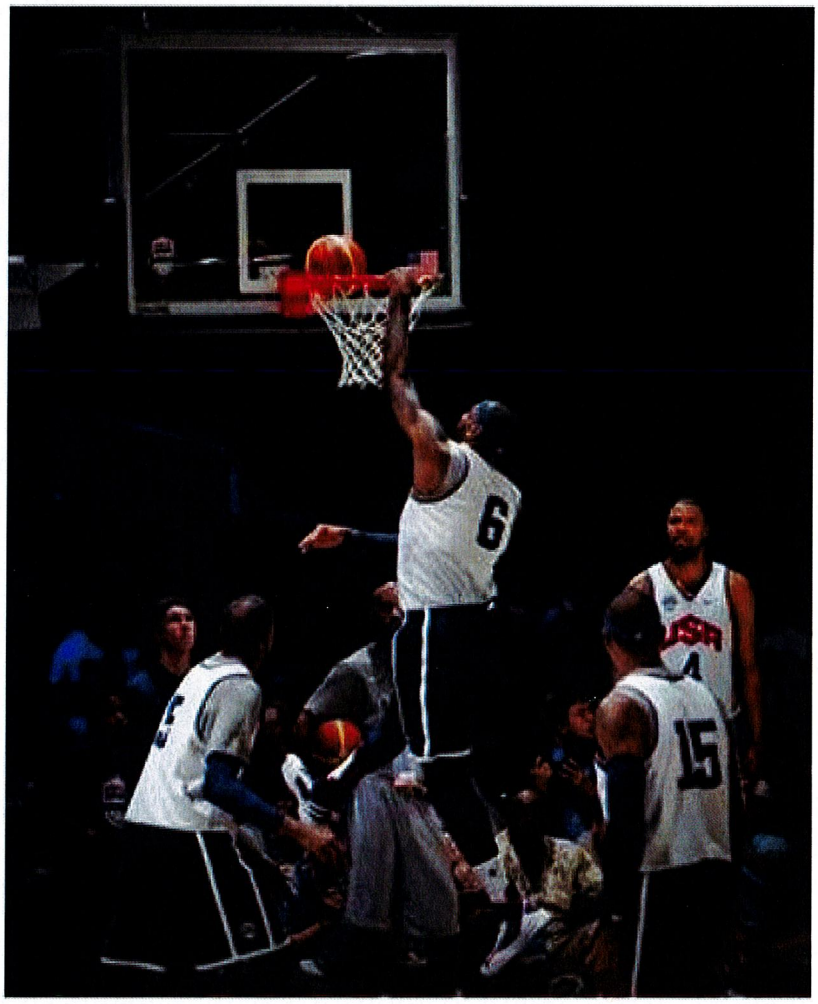
I. Interaction: To act on or be acted upon by one or more objects.

Name: _____ Date Due: 11/22/19 Science 6 Period: **2 3 5 6 7**

Science HW: Read / finish the article then STUDY / Practice Vocabulary for Test 11/22/19

Sir Isaac Newton and LeBron James

by ReadWorks



The English physicist and mathematician Sir Isaac Newton discovered three basic laws of motion. **The First Law** says that objects at rest and objects in motion will remain at rest or in motion, unless they are acted upon by an "unbalanced force." The Second Law says that when a force acts on a mass, acceleration is produced. The greater an object's mass is, the more force is needed to accelerate it.

Newton's laws of motion have become known throughout the world, including his **Third Law of Motion.** It reads: "For every action, there is an equal and opposite reaction." A simpler way of saying this might be: "When you push an object, it pushes back." For every force, in other words, there is a reaction force equal in size.

There are many ways to describe how the Third Law of Motion works in the world of sports. One of the more interesting examples is the way that LeBron James dunks a basketball.

In order for LeBron James to score a slam-dunk, he must exert a certain amount of force against the surface of the basketball court. LeBron James is a big man. He is 6 feet, 8 inches tall. He weighs 245 pounds. When he is standing upright, with his arms raised above his head, his reach extends to 8 feet and 10 ¼ inches.

The rim of the basketball hoop is exactly 10 feet high. For LeBron James to slam the ball, he must propel himself high enough that he can force the basketball, which is approximately 9.39 inches in diameter, into the hoop. This requires that he reach well above the height of the rim, which he does fairly often. In photographs and slow-motion replays of LeBron James dunking the basketball, his elbow is often equal to the height of the rim!

LeBron James may be tall, strong, and fast. He may be extremely mobile and flexible. But it is no easy feat to dunk a basketball, especially when you weigh 245 pounds. His vertical leap—that is, the maximum height he can reach when he jumps—is around 44 inches. The average vertical leap in the National Basketball Association, or NBA, is about 27 inches. That means that LeBron James, despite his large size, can jump more than 10 inches higher than most players in the NBA! This is a serious benefit in basketball, a game of inches in which how high someone can jump often means the difference between scoring and missing the shot.

Why can LeBron James jump higher than other basketball players? The answer has to do with Newton's Third Law of Motion. When LeBron James jumps, he is driving force into the court. That force is created by the energy stored inside his muscles. And how high he jumps depends not just on how much energy he forces into the surface of the court, but also on how well he does it. (Q#5)

When LeBron James jumps, he pushes down on the surface of the court. This is the "action" that Newton mentions in his Third Law. The "reaction" comes when the floor pushes back using an equal amount of force.(Q#6)

It may seem strange to think of the floor exerting force on an object, especially a basketball player. But this concept is what Sir Isaac Newton understood way back in 1687, when he published his most famous book, *Mathematical Principles of Natural Philosophy*.

Newton would have been fascinated by LeBron James's jumping ability. But he would also have understood that it is not simply the strength of James's legs that enables him to jump so high. The stability of his body, located in his core and his torso, also contributes to the energy that he forces into the surface of the court. The energy and strength of LeBron James's *entire body* is what enables him to reach such fantastic heights.

Watching LeBron James dunk on television often causes people to think he is defying the force of gravity, which pulls us and other objects to the ground. In reality, no one can defy such force. LeBron James just happens to be so strong and agile that, when he jumps into the air, he *appears* to be defying the force of gravity. He seems almost capable of flying.

.....S T O P.....

Naturally, smaller basketball players require less force to dunk a basketball. Since they are lighter, they don't have to combat the same gravitational pull. On the other hand, the fact that they are lighter means they do not have as much mass to store energy. The more muscles you have, the more energy you can force into the ground, and the higher you can go.

This is why professional basketball players appear to have no fat on their bodies at all. Fat does not store energy as effectively as muscle, but it still contributes to one's body weight. Fat on a basketball player is equal to wearing lead weights around their hips during a game. Obviously, this would hinder a player's performance, especially his ability to dunk.

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_____ The amount of matter "stuff" in an object

_____ A simple piece of technology designed to measure force.

_____ the downward force of gravity on a mass

_____ forced (pushed) into a smaller space; (when the mass pulls the spring down, it is being...

_____ The common unit for measuring force (N)

_____ An interaction between objects; a push or pull

_____ A force acting between surfaces in contact; that acts to resist motion

(write the definition of the unused words here):

H. **Gravity:** _____

_____

I. Interaction: _____

_____

Name: _____ **Date:** _____

1. What is Sir Isaac Newton's Third Law of Motion?

A. Objects at rest and objects in motion will remain at rest or in motion, unless they are acted upon by an unbalanced force.

B. For every action there is an equal and opposite reaction.

C. When a force acts on a mass, acceleration is produced.

D. When a force acts on a mass, the mass increases.

2. What does the author describe in the passage?

A. Sir Isaac Newton's most famous book, *Mathematical Principles of Natural Philosophy*

B. how LeBron James developed his basketball dunking skills

C. how Sir Isaac Newton came up with the three basic laws of motion

D. how the way that LeBron James dunks a basketball illustrates Newton's Third Law of Motion

3. Read the following sentences from the passage: "When LeBron James jumps, he pushes down on the surface of the court. This is the 'action' that Newton mentions in his Third Law."

Based on this information, LeBron James jumping is an example of which part of Newton's Third Law?

A. both the action and the equal and opposite reaction

B. the equal and opposite reaction of an action

C. the action which causes an equal and opposite reaction

D. neither the action nor the equal and opposite reaction

4. The force created when the court pushes LeBron James upwards is equal to which force?

A. the force LeBron James used to dunk the ball

B. the force LeBron James drives into the court when he jumps

C. the force LeBron James uses to throw the ball

D. the force LeBron James drives into the court when he lands after jumping

5. When Labron James jumps, he is driving force into the court. How is that created? (may also use a labeled diagram to help you explain)

_____

_____

_____

6. How does the example of LeBron James jumping to dunk a basketball illustrate Newton's Third Law of Motion?

_____

_____

_____

_____

Newton's Laws	Example / Picture
First Law of Motion	
Third Law of Motion	

Before I read...

What I think about this book:

(Why did you choose it, why are you excited to read the book?

What predictions or questions do you have:

Chapter: _____

One word to describe this section is:

How I felt about this section:

New words or important words in the reading

Important characters I met

The most important events in this section are:

Questions or predictions I have: