GRADE 7

ENGLISH
MATH
SCIENCE
SOC. STUDIES

PICKENS COUNTY SCHOOLS

Standards-Based Assignment Packet

Subject/Grade: <u>Reading & Mathematics 7</u>

Textbook: Holt McDougal Mathematics Grade 7

7th Grade Math

All workouts should be included. Answers only will not be accepted.

Assignment 1 - Re-read textbook pages 322-323 and work problems 1-22 on page 324.

Assignment 2 - Read pages 330-331 and work problems 1-23 on page 332.

Assignment 3 - Read pages 336-337. Work problems 1-18 on page 338

Assignment 4 - Complete textbook p 328 & page 344 to review chapter 8.

Assignment 5 - Complete textbook page 355 and define the vocabulary words on page 396

Assignment 6 - Read pages 360-361 in the textbook. Pay attention to the information in the green charts, especially the formulas. Complete problems 1-24 on page 362.

Assignment 7 - Read pages 364-365. Notice that a circle's diameter is twice as large as its radius. Conversely, a circle's radius is half as large as its diameter. Become familiar with the area formula of a circle and know that 3.14 is used in place of pi. Complete 1-22 on page 366.

Assignment 8 - Read pages 368-369. Within the examples, different area formulas are provided. Complete problems 1-15 on page 370.

Assignment 9 - Read pages 374-375. Pay attention to the terms vertex, face, and edge. Also, look at the differences between the 3-D shapes. Complete problems 1-18 on page 376.

Assignment 10 - Read pages 382-383. Complete problems 1-12 on page 385.

There is also a course set up in Edgenuity that will cover the same topics as the assignments listed above.

If you need assistance, the following websites can be helpful:

Mathisfun.com
Mathhelp.com
Math.com
KhanAcademy.com

The Sheaves
by Edwin Arlington Robinson

Where long the shadows of the wind had rolled,
Green wheat was yielding to the change assigned;
And as by some vast magic undivined
The world was turning slowly into gold.
Like nothing that was ever bought or sold   5
It waited there, the body and the mind;
And with a mighty meaning of a kind
That tells the more the more it is not told.

So in a land where all days are not fair,
Fair days went on till on another day   10
A thousand golden sheaves were lying there,
Shining and still, but not for long to stay --
As if a thousand girls with golden hair
Might rise from where they slept and go away.

Name: _____ **Date:** _____

1. What is happening where the shadows of the wind have rolled?

    A. green wheat is yielding to change

    B. a thousand girls with golden hair are rising

    C. a thousand girls with golden hair are sleeping

    D. things are being bought and sold

2. What rhyme scheme does the poet use to express ideas in this poem?

    A. ABABABAB CDCCDC

    B. ABCDABCD BBCCDD

    C. ABCABCAB CDCDCD

    D. ABBAABBA CDCDCD

3. The green wheat is changing color.

What lines from the poem best support this conclusion?

    A. lines 2-4, 11

    B. lines 7 and 8

    C. lines 9 and 10

    D. lines 1, 5, and 6

4. What are "the sheaves"?

    A. girls with golden hair

    B. bodies and minds

    C. bundles of wheat

    D. days that are not fair

5. What is a theme of the poem?

    A. change

    B. greed

    C. loyalty

    D. exploration

6. Read lines 6-9 from the poem:

It waited there, the body and the mind;
 And with a mighty meaning of a kind
 That tells the more the more it is not told.

What idea is the poet expressing in lines 8 and 9?

>   A. When something is not told to anyone, it loses all of its meaning.
>
>   B. Waiting for something is more difficult to do mentally than it is to do physically.
>
>   C. The best way to learn something is to ask someone about it.
>
>   D. The more something is kept a secret, the more meaningful it is.

7. Read lines 11-14 from the poem:

A thousand golden sheaves were lying there,
 Shining and still, but not for long to stay --
 As if a thousand girls with golden hair
 Might rise from where they slept and go away.

What words does the poet use to compare the sheaves to girls with golden hair?

>   A. "from where" (line 14)
>
>   B. "as if" (line 13)
>
>   C. "but not" (line 12)
>
>   D. "were lying" (line 11)

8. How are the sheaves similar to girls with golden hair? Support your answer with evidence from the poem.

_____

_____

_____

9. Read these lines from the poem:

Where long the shadows of the wind had rolled,
 Green wheat was yielding to the change assigned;
 And as by some vast magic undivined
 The world was turning slowly into gold.
 Like nothing that was ever bought or sold   5
 It waited there, the body and the mind;

And with a mighty meaning of a kind
 That tells the more the more it is not told.

What does "It" in line 6 refer to? Support your answer with evidence from the poem.

_____

_____

_____

10. What might a "mighty meaning" of the wheat be? Support your answer with evidence from the poem.

_____

_____

_____

A Crooked Election
by Kyria Abrahams

Kelly is running for class president of Wright High School. Some of Kelly's classmates think elections are pointless. Kelly's best friend Maya doesn't believe in voting at all.

"I'm not voting," Maya tells her. "Voting is pointless."

"But if you don't vote, someone else will. And then they'll get what they want and you won't get what you want!" Kelly says.

"I don't want anything. I just want to be left alone." Maya responds.

Kelly is running for class president because she says she thinks the school can be better. She wants to see less meat served in the cafeteria and more vegetarian options. She also wants the school to stop bringing a live goat onto the field during football games.

"Kelly has good ideas, but won't be able to change anything," Maya tells her classmates. "She's just idealistic. No one can change anything."

Kelly's opponent, Roger, is running for class president of Wright High School because his brother was president last year. In fact, Roger has three brothers, and all three of them have been class president.

"I'm not losing to anybody," Roger tells his brothers. "Especially not a *girl*."

Roger has really nice banners professionally printed and hangs them around the school. Roger's banners say: "Roger Whitaker. The Right Man for the Wright Job." The phrase "right man" is a reference to the fact that Kelly is a girl. Roger says that girls can't be president because they cry too much. He only says this secretly to his brothers. He would never admit this opinion to his classmates.

"All Kelly cares about is that we have tofu in the cafeteria," Roger tells his classmates. "But I want to fix the broken doors in the bathroom!" Roger holds up a screwdriver as he says this and makes a grunting "man" sound.

The election banners were given to him as a gift by the Harrison kids. Their dad owns Harrison Sign Manufacturers and made the signs for free.

"Just make sure that when you get elected-and we are confident that you will-you tell the school that they need new signs." They shake hands and give him the free signs, which suddenly don't seem so free.

Roger looks around the school and sees that they do, in fact, need new signs. The exit sign above the main door is cracked. The sign above the library just says "Librar." The menu next to the school cafeteria is so old it says you could get a peanut butter and jelly sandwich for 50 cents.

So, maybe it is a bit unfair to take something from a student who's going to vote for you. But Roger figures they have a good point about the signs.

Meanwhile, Kelly has been running around the school putting up signs of her own. They are all handmade from construction paper with fresh flowers on them. They say, "Make the school beautiful. Vote Healthy for Kelly."

Maya tells Kelly they look nice, but she doesn't think they'll do anything.

"It's just lipstick on a pig," she says. "Just because you make it look nice doesn't mean it's not still a pig."

Kelly's handmade signs make Roger nervous, because they seem more honest and down-to-earth. Although his signs are really nice and professional, it's also obvious that they cost money. Roger feels like the students don't relate to him.

He wants the other students to think he's just like them, so he organizes a barbecue during school lunch hours with free hot dogs. Actually, it's the Harrison brothers' idea. They even get him a deal on the hot dogs, from their cousin's supermarket, of course.

A few kids come by, but Roger also notices that a good amount of students stay in the cafeteria, eating food they brought from home. He can't figure out why someone would want to eat a stale sandwich when he's offering free hot dogs.

The hot dog giveaway is definitely a flop. Roger goes home dejected and sad.

The next day, the school holds a debate between the two candidates. The debate is moderated by their civics teacher, Mrs. Graham.

Roger and Kelly sit on stage, opposite each other. The auditorium is filled with students, all of whom will have the opportunity to vote. All the students are watching with great interest, as this is how they will make their decision. One wrong answer today and it could mean losing the presidency.

Mrs. Graham asks the first question.

"As class president, how would you see fit to spend the school's extra money?"

Kelly answers first. "Well, I certainly wouldn't be spending our money on expensive signs and hot dogs," she says.

The audience gasps. This is a low blow. It's surprising that Kelly would say something like that.

Roger looks into the audience and sees the Harrison brothers sinking down into their seats.

Kelly continues, "I would like our school to be healthier, and I know we have many students who are vegetarian. They don't have many options for lunch, and if they forget to bring lunch from home, sometimes they don't eat lunch at all!"

At this, at least 50 students stand up and applaud. Even Maya stands and applauds, although she rolls her eyes a little, too. The other students join in the cheering.

Of course, a few students start booing, just to be jerks.

"Eat more bacon!" says one, cupping his hands around his mouth so the sound will carry.

"Eat a vegetarian!" says another, laughing and throwing pieces of paper.

"Okay everyone, that's enough!" the moderator says from stage. The students who are booing the vegetarians just look like troublemakers now.

Roger looks into the audience. He finally realizes how many students are vegetarian; he has never thought to find out before.

"What about you, Roger? What will you spend money on?"

"Well, I would like to have a new sign for the cafeteria," he says. "And that could certainly include any vegetarian options that the school may end up providing."

"Oh please! Without me to push for it, the school will never change its menu," Kelly says. "Roger offers empty promises. And he thinks he is better than me because I'm a girl!"

The students start to applaud and Roger watches the Harrison brothers sneak out the back door.

When the debate is over, Roger can tell that he lost. His failure is palpable; he can feel it. Students clamor around Kelly in a group, hugging her and telling her how they can't wait for the new lunch menu.

Only a few people come up to Roger.

"I liked your nice sign," says Peggy, pushing her glasses up on her nose and squinting.

"Thanks," said Roger. "Can I count on your vote next week on election day?"

"Oh, that," Peggy says. "Well, actually, I'm voting for Kelly. I just wanted to be nice to you."

After school, the Harrison brothers are waiting outside to talk to Roger. He notices they are carrying some of Kelly's signs.

"We're going to have to withdraw our support," Boyd Harrison tells him.

"We just don't think you look like the winning candidate," Trent Harrison says. "And we really need to get behind someone who can help bring our dad more business."

"What are you talking about?" Roger says, angrily. "I was your guy! You supported me! I thought we were friends."

"Yeah, friends. Well, about that...You see, it's just that Kelly will bring in a lot more business for our dad's company," says Trent.

Boyd nods in approval. "It's nothing personal. You're a nice dude and all. But Kelly has a little more... *spirit*."

"Kelly? Oh please!" Roger is yelling now. "Her signs are all handmade! Didn't you see them? It's just hipster junk!"

"Oh, yeah, you noticed that? We went for a more 'indie' feel with these." Trent says.

"Tried to make them look handmade." Boyd interjects. "The hipsters love that. We're glad you noticed."

Kelly is coming out of the school now, and the Harrison brothers walk away from Roger without saying a word. Each brother puts an arm around Kelly.

"How's our best girl?" they ask.

Kelly smiles. "Doing just great now," she says. "Now that Roger looks like a woman-hating meat-eating loser."

"We've got this election in the bag," Boyd says. "A vegetarian bag, that is."

Trent holds up a bag of veggie burgers. "We've even been eating these at lunch, showing all those health-conscious kids that we're one of them."

"Well, you sure do look trustworthy now, don't you?" Kelly says, laughing. "But do you have any real food? I'm so sick of this vegetarian junk. My stomach is killing me!"

"You bet we do," says Boyd. "In fact, we have a whole bunch of hot dogs left over from Roger's barbeque yesterday. Let's go to our house and have dinner."

"By the way," Kelly says, "How did you convince people not to go get delicious free hot dogs? I think he could have really turned people to his side with that."

"It was easy," Boyd says. "We started a rumor that Roger left the hot dogs out in his car overnight. Nobody wanted to get sick. He was so depressed; he just left everything sitting there. We grabbed all the leftovers and took them back home."

"That's brilliant," Kelly says. "I can't thank you enough!"

"Well, you won't have to thank us once you're elected. Just make sure the school uses our dad's business. And, oh yeah, when the cafeteria goes vegetarian, you know which veggie burgers are the best choice."

Boyd dangles the bag in front of her and, for the first time, she reads the label: "Harrison's Burgers."

"Victory has never tasted so sweet," Kelly says.

Name: _____ Date: _____

1. Why does Kelly say she is running for class president?

    A. She says the school needs new signs.

    B. She says the school cafeteria should have more hot dogs.

    C. She says she thinks the school can be better.

    D. She says the football games can be more exciting.

2. What motivates the actions of Boyd and Trent Harrison?

    A. They want to be elected class presidents.

    B. They want to bring in money for their family's businesses.

    C. They want to prove they are better than Kelly.

    D. They want to embarrass Roger in front of the school.

3. The Harrison brothers give Roger free signs for his election campaign so that their father's sign company will get money from the school. Which evidence from the passage best supports this conclusion?

    A. "The election banners were given to him as a gift by the Harrison kids. Their dad owns Harrison Sign Manufacturers and made the signs for free."

    B. "They shake hands and give him the free signs, which suddenly don't seem so free."

    C. "Roger looks around the school and sees that they do, in fact, need new signs. The exit sign above the main door is cracked."

    D. "'Just make sure that when you get elected-and we are confident that you will-you tell the school that they need new signs.'"

4. How can Boyd and Trent Harrison best be described?

    A. loyal

    B. unintelligent

    C. opportunistic

    D. idealistic

5. What is this passage mostly about?

    A. an election with two crooked candidates

    B. a kindhearted and honest girl who runs for class president

    C. reasons why teenagers don't believe in voting

    D. why vegetarian food is healthier than hot dogs

6. Read the following sentences: "When the debate is over, Roger can tell that he lost. His failure is **palpable**; he can feel it. Students clamor around Kelly in a group, hugging her and telling her how they can't wait for the new lunch menu."

What does **"palpable"** mean as used in the passage?

    A. unnoticeable and minor

    B. disappointing and annoying

    C. helpful and encouraging

    D. obvious and intense

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

In her election campaign, Kelly says that she wants more vegetarian food in the cafeteria; _____, she does not actually like vegetarian food.

    A. therefore

    B. however

    C. obviously

    D. particularly

8. Who made Kelly's posters?

_____

_____

_____

9. Trent and Boyd Harrison want to use the class election to make money for their family. They give Roger free signs from Harrison Sign Manufacturers so that, if Roger is elected, he will get the school to buy new signs from the Harrison business.

What is another way that the brothers use the election to make money for their family?

_____

_____

_____

10. The word "crooked" can be used to describe something that is dishonest or corrupt. Explain why the election and the people involved in it are crooked.

_____

_____

_____

Science 7

The History of Planet Earth
by ReadWorks

Our planet is no spring chicken. The history of the earth stretches over billions of years. In that time period, a lot has changed. Some of those changes took place over a very long time, too slowly and gradually for people to discern. Some changes, on the other hand, took place very quickly.

Water, wind and ice slowly shape the surface of the earth, constantly moving all around us. Activity just beneath the surface of the earth's crust creates rapid changes in the shape of the land-that's where we get volcanoes, landslides and earthquakes.

Glaciers, which are huge, very old formations made out of water, earth and ice, can even change the size and shape of the oceans. These major shifts take place over millions of years. We can see the results, but apart from measuring them and seeing where growth or change took place, we can't observe these changes as they occur. They simply happen too slowly.

Erosion is an example of a slow process that changes the surface of the earth. Think of a windy beach, how sand from the beach is carried toward the dunes or, depending on the behavior of the wind, how the sand from the dunes is carried further down the beach. We can see and feel the sand moving over the land and through the air, but the long-term effects of that movement won't be visible for years.

The earth's surface is also made up of very slowly moving parts, called tectonic plates. These plates fit like puzzle pieces and make up the outermost layer of the planet. When this layer moves around, it can cause earthquakes and volcanic eruptions. It's very easy to spot these changes as they're happening! In fact, we have to be very careful and prepare for them in advance, and take safety measures before and after they occur.

Volcanoes, earthquakes and landslides aren't everyday events. If they were, we'd be in big trouble! Ordinarily, the movement of the plates is extremely slow, yet very powerful. Plate movement is one of the major forces that changes the location and shape of continents and oceans-major changes that we can't detect and that appear gradually over millions of years.

Some earth-changing events occur naturally, but others come from us, from humans. It's important to remember that we have our own impact on the earth. In many cases, humans influence the earth's natural processes on purpose, speeding them up, slowing them down, or manipulating them in other ways to get something we want-usually a natural resource, like water or oil. Some of what we do to our planet is on purpose, and some of it is accidental.

Cutting down forests, building new houses, bridges, office buildings and movie theaters, can lead to quickening natural events that might have taken much longer without humans' involvement.

You can walk outside any time you like and see the planet stir: wind moving particles of sand and rock, water dripping from one surface onto another, seasons changing each year. Everything you see on a walk around your neighborhood contributes to the earth's changing and maturing, just like everything we do every day contributes to what we'll be like as people 10 years, 20 years, even 50 years from now. And those changes in our bodies and personalities-unless something unusual happens-take time to show up too.

It's interesting to think about how what we do and the forces that act on us affect who we become. The earth is like a big, changing organism, just like we are.

Name: _____ **Date:** _____

1. How much has the earth changed in its history?

    A. a lot

    B. a little

    C. not at all

    D. not enough for anyone to notice

2. Two effects mentioned in this passage are earthquakes and volcanic eruptions. What is their cause?

    A. wind that blows sand from one place to another

    B. water dripping from one surface onto another

    C. the construction of houses, movie theaters, and bridges

    D. the movement of the earth's outermost layer

3. Some of earth's changes take place too slowly for people to notice them happening.

What evidence from the passage supports this statement?

    A. Changes like earthquakes and volcanic eruptions are not everyday events, but they are easy to spot when they are happening.

    B. People notice changes glaciers have made to the size and shape of earth's oceans after the changes have taken place.

    C. Earth's history goes back billions of years, and a lot of changes, both fast and slow, have taken place over that period of time.

    D. People sometimes influence earth's natural processes on purpose by speeding them up, slowing them down, or manipulating them in other ways.

4. What is an example of change on earth that people can see happening?

    A. glaciers changing the size and shape of earth's oceans

    B. sand blowing from one part of a beach to another

    C. tectonic plate movement changing the location and shape of earth's continents

    D. tectonic plate movement changing the location and shape of earth's oceans

5. What is this passage mainly about?

    A. glaciers and erosion

    B. landslides and earthquakes

    C. changes in the earth

    D. changes in the human body

6. Read the following sentences: "Water, wind and ice slowly shape the **surface** of the earth, constantly moving all around us. Activity just beneath the **surface** of the earth's crust creates rapid changes in the shape of the land-that's where we get volcanoes, landslides and earthquakes."

What does the word "**surface**" mean in the sentences above?

    A. a process that changes the shape of the earth

    B. an effect that takes many years for people to notice

    C. the middle or central part of something

    D. the outer layer or part of something

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

The earth is shaped by the movement of different forces, _____ water, wind, and ice.

    A. never

    B. instead

    C. finally

    D. including

8. How do humans influence the earth's natural processes?

_____

_____

_____

9. How are changes in the earth similar to changes in human beings?

_____

_____

_____

10. The passage describes some ways that changes in the earth and changes in people are similar. What are some ways that changes in the earth and changes in people are different? Support your answer with evidence from the passage.

_____

_____

_____

Sir Isaac Newton and LeBron James

by ReadWorks
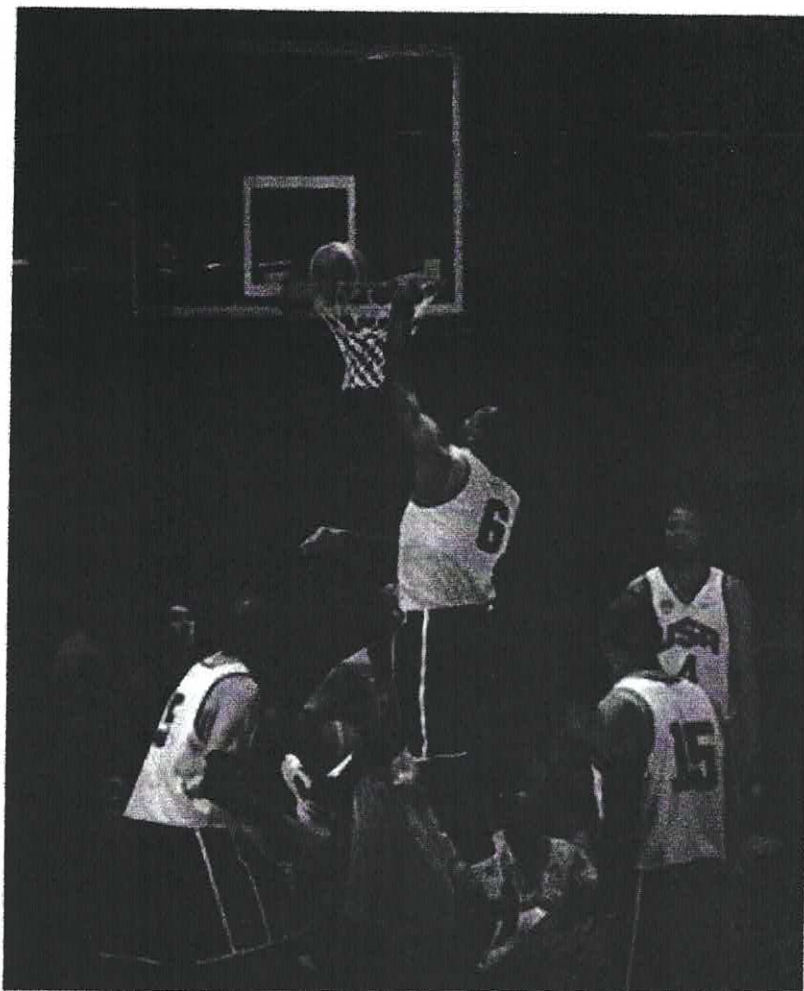
The English physicist and mathematician Sir Isaac Newton discovered three basic laws of motion. The First Law says that objects at rest and objects in motion will remain at rest or in motion, unless they are acted upon by an "unbalanced force." The Second Law says that when a force acts on a mass, acceleration 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.

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.

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.

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.

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.

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. What is the main idea of this passage?

    A. LeBron James and Michael Jordan are two of the best players in the history of professional basketball.

    B. Basketball players must have high vertical leaps in order to dunk basketballs.

    C. Newton's Third Law of Motion is related to the First and Second Laws of Motion.

    D. Newton's Third Law of Motion can be examined using the examples of basketball players jumping.

6. Read the following paragraph from the passage:

"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 10¼ inches."

How can the tone of the author best be described in this paragraph?

    A. humorous

    B. angry

    C. disinterested

    D. factual

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

_____ LeBron James has an impressive vertical leap of 44 inches, Michael Jordan holds the record with a vertical leap of 48 inches.

    A. In contrast

    B. For example

    C. Although

    D. Initially

8. According to the passage, in order for LeBron James to score a slam-dunk, what must he exert?

_____

_____

_____

9. When LeBron James jumps, he is driving force into the court. How is this force created?

_____

_____

_____

10. How does the example of LeBron James jumping to dunk a basketball illustrate Newton's Third Law of Motion? Use information from the passage to support your answer.

_____

_____

_____

Should trials use eyewitness testimony?

YES! VS NO!

They Were There

Many trials include eyewitness accounts. When people see a crime happen, they must be allowed to describe what they saw. Sometimes that's the best evidence there is.

Those who are against eyewitness testimony argue that memory can be wrong. They point out that memory is not as foolproof as fingerprints or video evidence. However, perfect evidence like that doesn't always exist. And even when it does, it may not tell the full story. Juries need to hear every part of a story before convicting a suspected criminal.

Even though memories can be unreliable, sometimes they're the best clue that juries have about what happened and who was responsible. The key is making sure juries understand what affects memory. Preventing witnesses from telling their stories would be wrong. Instead, listeners should understand that some stories are stronger than others.

Eyes Can Lie

Research shows that we can't always trust human memory. This is a major problem in trials where the person on trial could be facing life in prison or, even worse, the death penalty. We should not use eyewitness testimony to make these decisions.

Many factors make memory less reliable. If the crime took place months or years ago, witnesses are less likely to remember details correctly. When people witness crimes from far away, they may miss important details. Additionally, when people are under extreme stress, they are less likely to remember correctly. Witnessing a crime or being a victim of one can create a lot of stress.

More than 70 percent of people who went to prison but were later proven innocent were judged guilty because of eyewitness accounts. Faulty eyewitness accounts can send an innocent person to jail!

Identify Reasons

A strong argument supports a claim with **reasons**, or statements telling readers why the claim should be believed. A reason should be:

- **Clear.** Is it easy to understand?
- **Relevant.** Does it relate to the claim?
- **Logical.** Does it make sense?

TREE

Thesis statement

Reasons

Evidence

Ending

Analyze Arguments

Identify a claim for each side. Then identify a reason and explain how it supports the claim.

Claim for Yes

Reason

How Reason Supports the Claim

Claim for No

Reason

How Reason Supports the Claim

Plan and Present a Debate

Take notes and prepare for the debate.

Opening Statement: Trials (should/should not) use eyewitness testimony because ...

Claim: ____

Reason: ____

Evidence: ____

Possible counterclaims: ____

____

____

Closing Statement

Academic
Vocabulary

feature
fea·ture (noun)
paragraph 6

Meaning

an important or interesting

_____ of something

Example

What do people say is your best **feature**?

People say my best _____

is my _____

because _____

_____

_____

distinct
dis·tinct (adjective)
paragraph 9

Meaning

clearly _____

Example

What is something that makes your school **distinct** *from other schools in your area?*

Something that makes our school

_____ from others is

_____

_____

_____

ROUND BLACK EARS

A BIG ROUND [

LARGE FORWA FACIA EYE

FLOPPY OR SHORT LIMBS

THE **CUTE** **FACTOR**

YOUTH
One cute cue is youth because young animals need care.

HEAD SIZE
Human babies' extra large heads make them especially cute.

FEATURES
The floppiness of rabbit's ears is a added cute facto

BY NATALIE ANGIER

1   "Omigosh, look at him! He is too cute!"

2   "How adorable! I wish I could just reach in there and give him a big squeeze!"

Part of the reason hedgehogs are so cute is their fuzzy, rounded bodies.

3   "He's so fuzzy! I've never seen anything so cute in my life!"

4   A guard's voice rises. "OK, folks, five oohs and aahs per person. Then it's time to let someone else step up front."

5   The 6-month-old, 25-pound Tai Shan—whose name is pronounced tie-SHON—was the first surviving giant panda cub ever born at the Smithsonian's zoo. Some 13,000 timed tickets to see the cub were snapped up within two hours of being released. They almost immediately began trading online for up to $200 a pair.

6   Scientists who study the evolution of visual signaling have identified a wide assortment of **features** and behaviors that make something look cute. Included are bright forward-facing eyes set low on a big round face, a pair of big round ears, and floppy limbs, among many others.

7   Cute cues are those that indicate extreme youth, harmlessness, and need, scientists say.

8   The greater the number of cute cues that an animal or object happens to possess, the louder the squeals.

9   Cuteness is **distinct** from beauty, researchers say. Cuteness emphasizes rounded over sculptured, soft over refined, clumsy over quick. Beauty attracts admiration. Cuteness attracts affection and demands a lap. ▶

assortment a mixture of different things
cues signals

Close Reading

Key Idea

What are cute cues?

Cute cues are _____

_____

_____

Identify Text Structure

What is the purpose of the labels in the photos on page 52? What do they help you understand?

The labels identify _____

_____

They help me understand _____

_____

Stretch

Name an animal you think is cute and one you think is beautiful. Use text evidence to support your choices.

(A/An) _____ is

cute because _____

_____

(A/An) _____ is

beautiful because _____

_____

STRATEGY TOOLKIT

Text Structure
Analyzing captions, labels, and other features helps you understand how different parts of the text contribute to the development of key ideas.

Academic
Vocabulary

appealing

ap·peal·ing (adjective)
paragraph 13

Meaning

having qualities that most people

_____

Example

What do you find most **appealing** *about your neighborhood?*

I find _____

_____

_____

most _____

about my neighborhood.

impulse

im·pulse (noun)
paragraph 17

Meaning

a _____ wish

or urge to do something

Example

What **impulse** *do you have when you see a cute baby?*

When I see a cute baby, I have

the _____

to _____

_____

_____

SNOOPY™
USA

TELETUBBIES™
United Kingdom

HELLO KIT
Japan

TOPO GIGIO™
Italy

PORORO™
South Korea

CUTENESS IS FOUND AROUND THE WORLD.

10   Researchers say the taste for cute varies in strength and significance across cultures and eras. They compare the cute response to the love of sugar. Everybody has sweetness **receptors** on the tongue. But some people, and some countries, eat a lot more candy than others.

11   Experts point out that the cuteness craze is particularly acute in Japan, where it goes by the name "kawaii." Truck drivers display Hello Kitty-style figurines on their dashboards. The police enliven safety billboards and wanted posters with two perky mouselike mascots, Pipo ku and Pipo chan.

12   In the United States, the use of cute imagery is geared toward celebrating the young. Today, it's not enough for a company to use cute graphics in its advertisements. It must have a really cute name as well.

13   Advertisers may use strategies based on our baby ′radar, but babies themselves did not really evolve to be cute. They became **appealing** to a potential caretaker's eye only because infants wouldn't survive otherwise.

figurines small models of people or animals used for decoration
taken aback confused or surprised

14 Human babies have unusually large heads. This is because humans have unusually large brains. Their heads are round because their brains continue to grow throughout the first months of life. Baby eyes and ears are far down the face and skull.

15 Baby eyes are also notably forward facing. And all our favorite Disney characters also sport forward-facing eyes. This includes the ducks and mice, species that in **reality** have eyes on the sides of their heads.

16 Baby movements are notably clumsy, jerky, and delayed. Learning to coordinate the body's many large and fine muscle groups requires years of practice. On starting to walk, toddlers struggle continuously to balance themselves between left foot and right.

17 Researchers who study animals appreciate the human **impulse** to nurture anything even remotely babylike. But they are at times taken aback by people's efforts to identify with their preferred species. ▶

LARGE HEAD
Babies' heads are large because their brains are growing.

FORWARD-FACING EYES
Babies' forward-facing eyes are also far down on their face.

SHORT LIMBS
Short limbs make it hard for babies to balance themselves.

ROUND BELLY
Babies have very round body parts.

CLUMSY MOVEMENTS
Toddlers wobble when they walk as they try to balance.
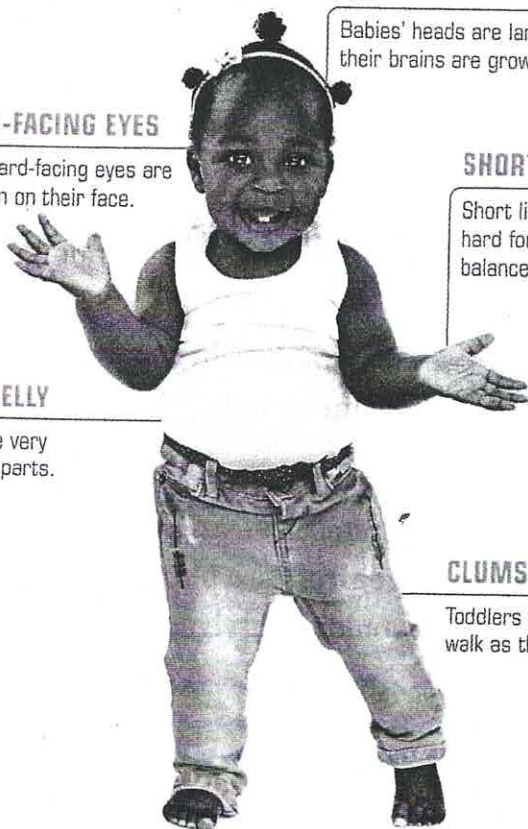
Close Reading

Key Idea
What makes people want to take care of babies?

People want to take care of babies

because they are _____

_____

Cite Text Evidence

How does the author support the idea that the love of cute things is very strong in Japan? Cite evidence.

The author states that truck drivers

_____

_____

and police _____

_____

React and Write

Choose a character from the map on page 54. Describe why it is cute. Use text evidence.

The _____

character is cute because of its _____

_____

_____

STRATEGY TOOLKIT

Cite Text Evidence
When you use an author's words to explain something you can say "the author states" or "according to the author."

Suffix	Meaning	Example Words
–able, –ible (adj)	able to; having a certain quality	*accessible*
–ate (verb)	to make, cause, or act	
–ation, –ion, –sion, –tion (noun)	act or process of doing something	
–er, –or (noun)	someone who does	
–ful (adj)	full of	
–ial, –al (adj)	having characteristics of	
–ive, –ous (adj)	having the qualities of	
–less (adj)	without	
–ly, –y (adv)	in a certain way	
–ment (noun)	act or process of	

Common Prefixes and Suffixes

Learn these affixes to use as clues to the meanings of unfamiliar words.

Prefix	Meaning	Example Words
con–, com–	together	communicate
de–, dis–	not; opposite of	
im–, in–	not; opposite of	
inter–	between	
mis–	bad; wrong	
non–, un–	not; opposite of	
pre–	before	
re–	again; back	
sub–	below; under	
trans–	change; move across	

Plan: Description of a Setting

Use the chart below to help you plan a description of a setting.
Use more or fewer boxes as needed.

The setting I'm describing is _____

First, I'll describe _____
Details:

Second, I'll describe _____
Details:

Third, I'll describe _____
Details:

Fourth, I'll describe _____
Details:

R180U_C_RDI_W_DescriptSet_PGO

Name: _____ Date: _____

Practice

Figurative Language

Figurative language helps readers picture what is being described.

- **Simile:** a comparison that uses the word *like* or *as*.

- **Metaphor:** a comparison in which one thing is said to be another.

A. Read the sentences below. Rewrite each sentence using the literal, or actual, meaning of the figurative language.

1. Grandpa is a **library of information**.

   _____

2. Grandma is **like the sun and the moon to me**.

   _____

3. The ocean **invited us in**.

   _____

4. Her smile is **as bright as the sun**.

   _____

B. Complete each sentence with a figurative expression. The first one is done for you.

5. My mother is a *tower of strength*_____.

6. Our team is as strong as _____.

7. The wind blows as _____.

8. The cat's fur was like _____.

9. The horse ran as fast as _____.

10. The sun _____.

Name: _____ Date: _____

Using Metaphors and Similes

Read each item below. Label it as *metaphor* or *simile*.

> - A **metaphor** is a way of describing something by calling it something else. Example: *Earth is* a spinning marble.
>
> - A **simile** is a comparison of two things using the words *like* or *as*. Example: *Earth is like* a spinning marble.
>
> - Metaphors and similes are used in writing to show how one thing is similar to another.

1. The fresh bread was as soft as a pillow.

_____

2. The whale was a steamship plowing through the water, blowing the whistle.

_____

3. I felt like a baby bird learning how to fly.

_____

4. The train was a black snake that curved around the mountain.

_____

Look at the words listed below. Write a description of each using a simile or a metaphor. Use two similes and two metaphors in all.

5. a basketball

_____

6. a book

_____

7. a cat

_____

8. snowflakes

_____

Order of Operations 3

1. $2(3+5)-6\div 2$

8. $(2+5)\bullet(10-6)$

9. $7\times 8+3$

2. $2(3)+5$

10. $16-8(3-1)$

3. $16\div 2+13$

11. $9(3+1)-8(5-2)$

4. $5+28\div 4$

12. $(11)(3)-(4)(2)$

5. $8\bullet 6\div 3\bullet 2$

13. $16\div 4+1$

6. $15\div 3+13$

14. $16+4\div 2$

7. $20+(2)(7)$

Name_____ Period_____ Date_____

Area of Triangles and Parallelograms

1) What is the equation for the area of a triangle?

2) What is the equation for the area of a rectangle?

3) What is the equation for the area of a parallelogram?

4) A=_____
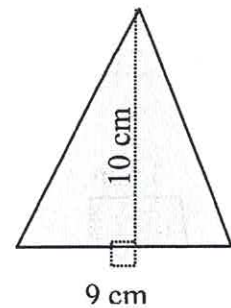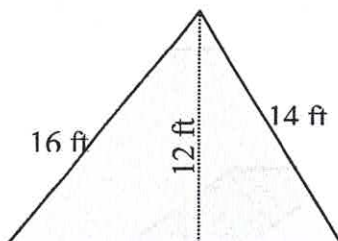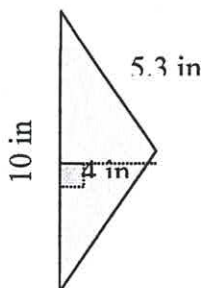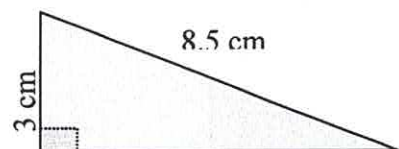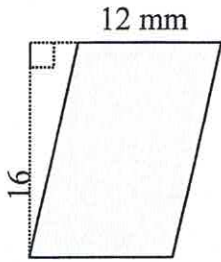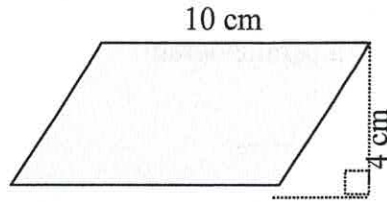
14.3 ft   14.3 ft
13 ft
12 ft

5) A=_____

13 in
16.3 in
15 in
16.3 in

6) A=_____

15 cm
26 cm

7) A=_____

34 ft
29 ft

8) A=_____

10 in
15.8 in
15 in
15.8 in

9) A=_____

10 cm
9 cm

10) A=_____

16 ft   14 ft
12 ft

11) A=_____

10 in
5.3 in
4 in

12) A=_____

8.5 cm
3 cm

13) A=___15 ft___

12 mm

16.

14) A=_____

5.3 in

10 cm

4 cm

15) A=_____

8 cm

5.2 yards

5.2 yards

16) A=_____

9 in

3 in

17) A=_____

4 miles

13

18) A=_____

11 ft

6 ft

19) A=_____

3 mm

5.1

20) A=_____

9 in

6 in

21) A=_____

12 cm

3 cm

22) A=_____

5 m

15 m

23) A=_____

10.7 ft

9.5 ft

24) A=_____

20

8 yd
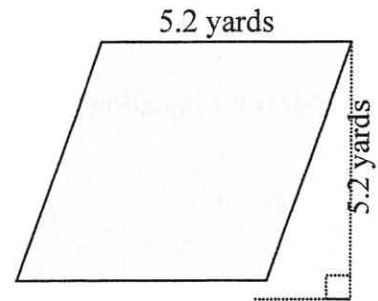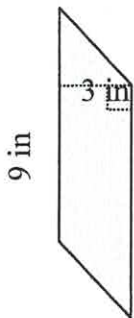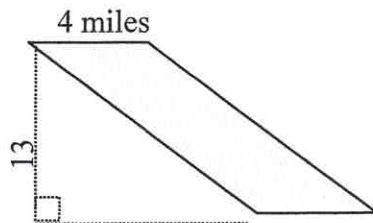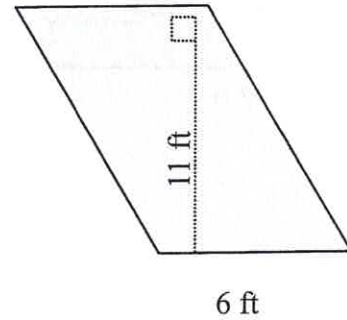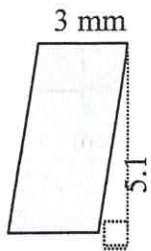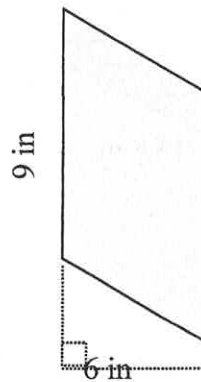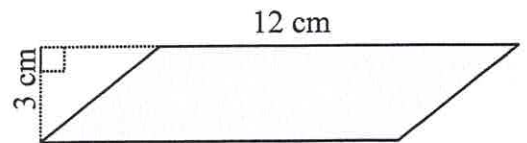
Name_____ Period_____ Date_____

Area of a Trapezoid

1) A=_____

8 ft
11 ft
10 ft

2) A=_____

3 miles
2
5 miles

3) A=_____

1 mm
8 mm
5 mm

4) A=_____

7 in
9 in
4 in

5) A=_____

15 m
6 m
9 m

6) A=_____

6 ft
8 ft
9 ft

7) A=_____

9 cm
5 cm
13 cm

8) A=_____

6 yd
3 yd
8 yd

9) A=_____

8 in
3 in
14 in

10) A=_____

11) A=_____

12) A=_____

3 mm

9 mm

13 mm

7 ft

6 ft

13 ft

25 miles

20

29 miles

13) A=_____

14) A=_____

15) A=_____

8 in

10 in

4 in

15 m

10 m

10 m

9 ft

10 ft

12 ft

16) A=_____

17) A=_____

18) A=_____

4 cm

5 cm

6 cm

6 yd

9 yd

8 yd

10 in

5 in

16 in
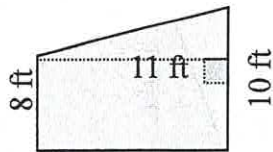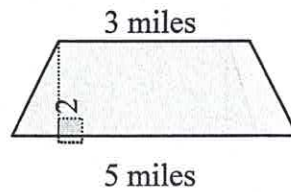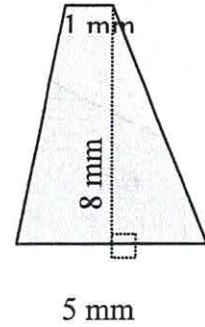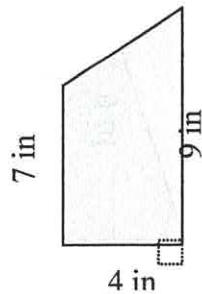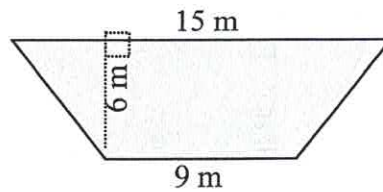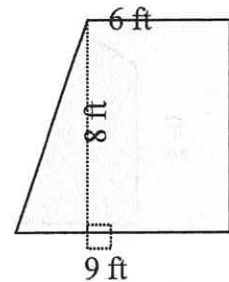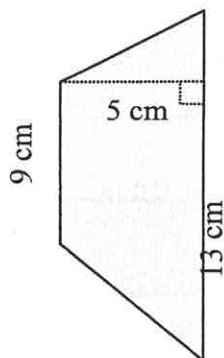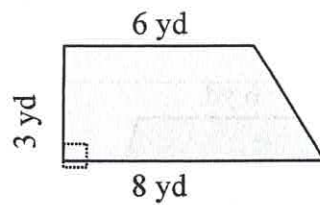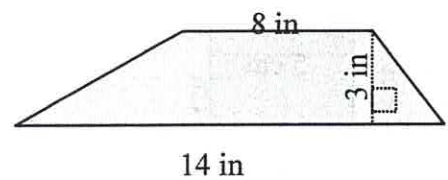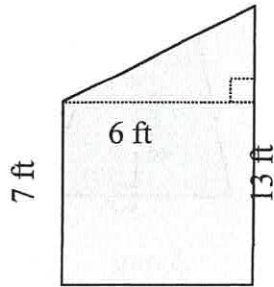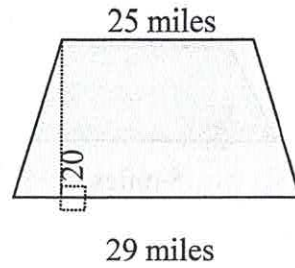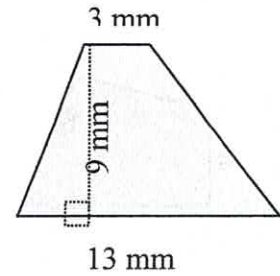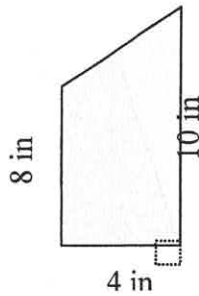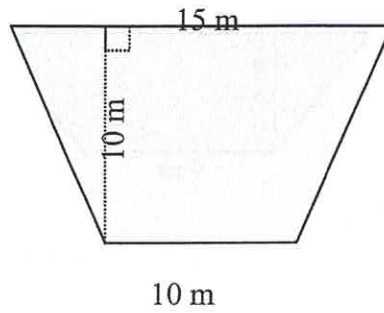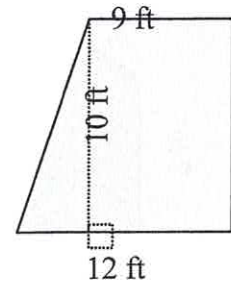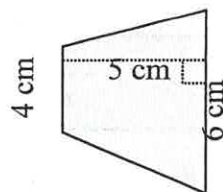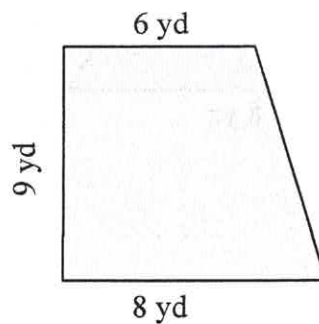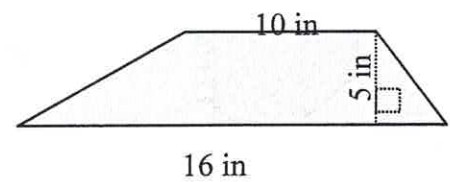
Name_____ Period_____ Date_____

Perimeter, Circumference, Volume, and Surface Area

1) Volume = _____

Surface Area = _____
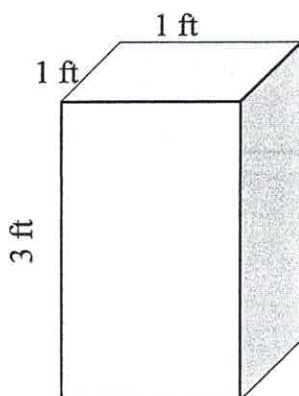
2) Volume = _____

Surface Area = _____
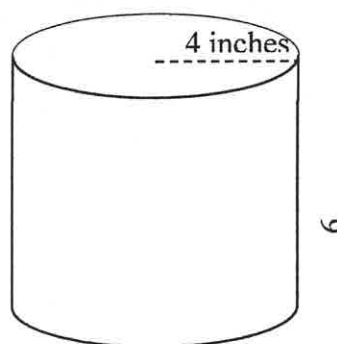
3) Volume = _____

Surface Area = _____
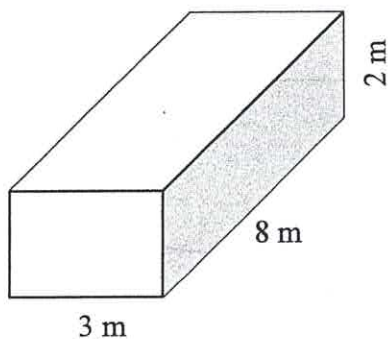
4) Volume = _____

Surface Area = _____

3) Perimeter = _____

    Area = _____

25 feet

15 feet

20 feet

4) Perimeter = _____

    Area = _____

3 miles

2.7

4 miles
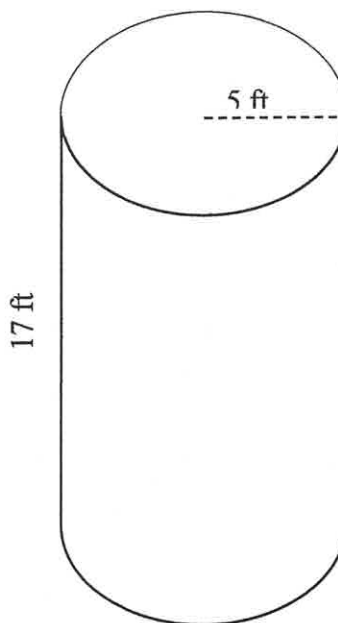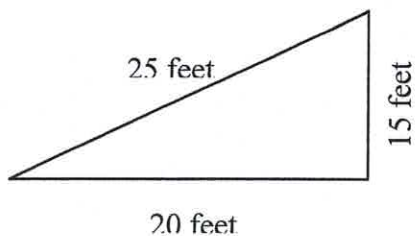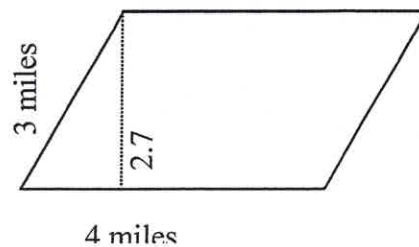
8) Circumference = _____

    Area = _____

Radius = 4 ft
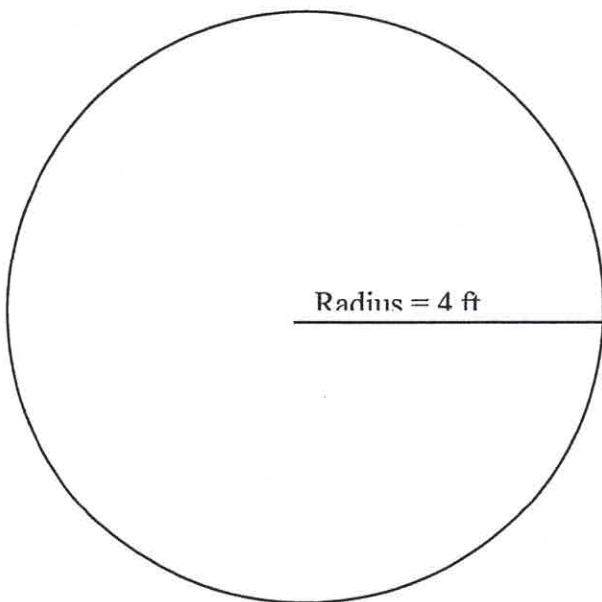
9) Circumference = _____

    Area = _____

Radius = 3 ft
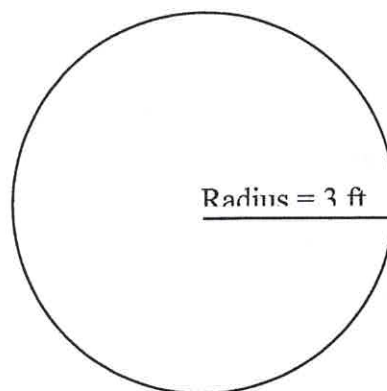
Name_____ Period_____ Date_____

Proportions 1

For problems 1 – 4, set up the proportion for each set of similar figures and solve for the missing length.

1.

8 in

6 in

x inches

18 inches

2.

9 feet

x feet

3 feet

2 feet

3.

12 yards

8 yards

x yards

6 yards
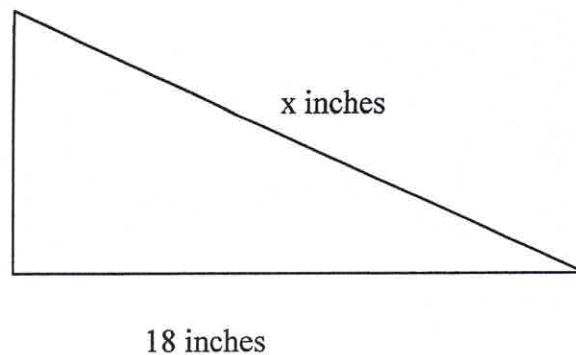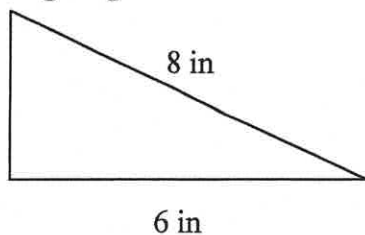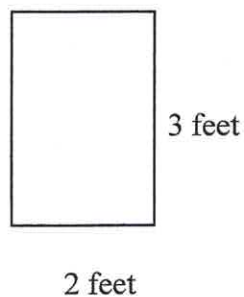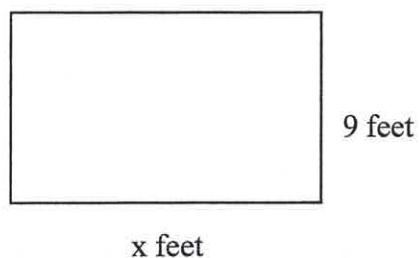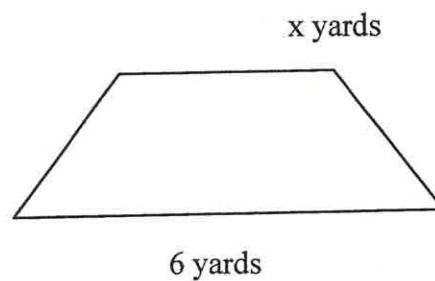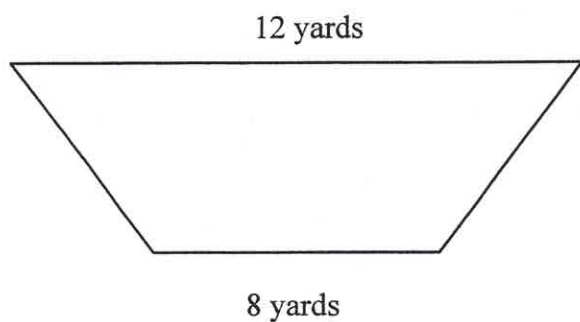
4.
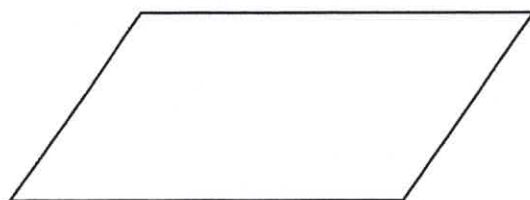
8 cm

2 cm

16 cm   x cm

For problems 5 – 8, use the scale factor to find the missing lengths.

5.   scale factor = $\dfrac{2}{3}$

10 in

x inches

6 in

y inches

6.   scale factor = $\dfrac{1}{2}$

15 feet

5 feet

x feet   y feet

7.   scale factor = $\dfrac{3}{4}$

21 yards

x yards

9 yards

y yards
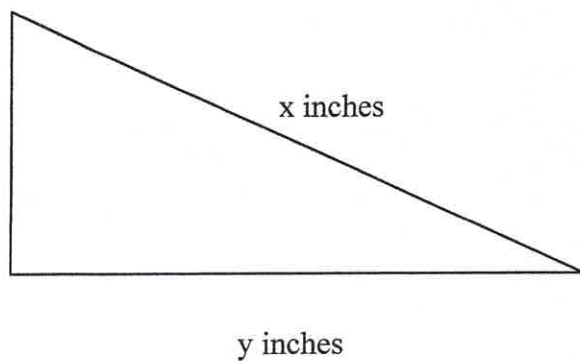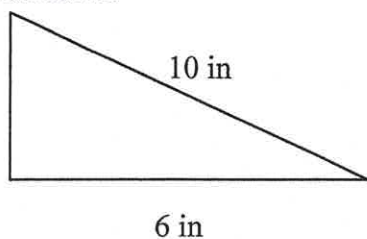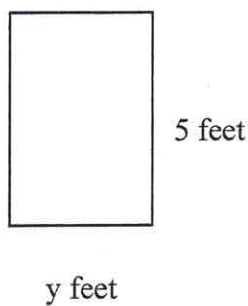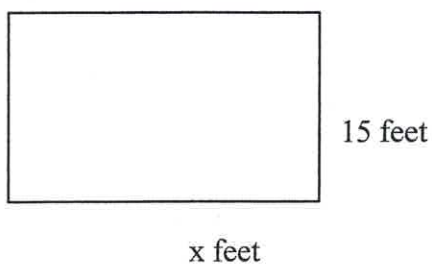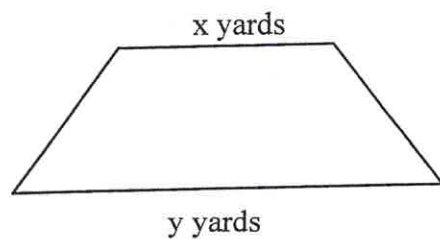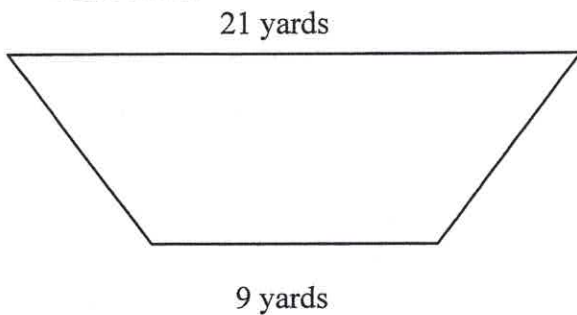
8.   scale factor = $\dfrac{1}{4}$

Name _____ Period _____ Date _____
Solving One-Step Equations 1

You must show your work to get credit!! Check your answer.

Adding and Subtracting
1) $y + 6 = 20$

2) $x - 10 = 12$

3) $12 + z = 15$

4) $2 + n = 16$

5) $a + 4 = 14$

6) $m - 5 = -10$

7) $4 + b = 30$

8) $10 + c = 25$

9) $x - 60 = 20$

10) $g - 16 = 4$
$w + 14 = 10$

11) $x - 15 = -20$

12)

13) $r - 18 = 27$
$f - 16 = 34$

14) $13 + k = 25$

15)

16) $j + 17 = 19$

17) $r - 16 = 5$

18) $9 + t = 56$

Multiplying and Dividing

19) $2x = 16$

20) $15 = 3t$

21) $\dfrac{k}{2} = 6$

22) $3h = 27$

23) $\dfrac{j}{3} = 4$

24) $6p = 30$

25) $\dfrac{n}{10} = 40$

26) $\dfrac{h}{4} = 15$

27) $9s = 81$

28) $14 = 2c$

29) $26 = 13d$

30) $6 = \dfrac{m}{3}$

31) $7 = \dfrac{p}{5}$

32) $4w = 16$

33) $\dfrac{f}{3} = 9$

Name_____Period_____ Date_____

Chapter 3 Part 2 Test

Multiply the following fractions. Reduce your answers, if possible.

1. $\dfrac{1}{6} \times \dfrac{2}{3}$

2. $\dfrac{2}{7} \times \dfrac{7}{9}$

3. $\dfrac{5}{9} \times \dfrac{2}{4}$

4. $4\dfrac{2}{5} \times \dfrac{1}{8}$

5. $\dfrac{7}{12} \times \dfrac{2}{3}$

6. $1\dfrac{1}{2} \times \dfrac{2}{3}$

7. $8 \times \dfrac{3}{5}$

8. $2\dfrac{1}{3} \times \dfrac{3}{4}$

9. $7\dfrac{4}{6} \times 1\dfrac{1}{5}$

Divide the following fractions. Reduce your answers, if possible.

10. $\dfrac{6}{7} \div \dfrac{1}{3}$

11. $\dfrac{3}{11} \div \dfrac{4}{10}$

12. $\dfrac{5}{7} \div \dfrac{1}{2}$

13. $2\dfrac{2}{3} \div \dfrac{3}{7}$

14. $6 \div \dfrac{1}{3}$

15. $7\dfrac{1}{2} \div 5\dfrac{2}{3}$

Use the distributive property to solve each problem.

16. $6(5 + 8)$

17. $3(6 - 2)$

18. $(1 + 7)5$

19. $9(10 - 2)$

20. $(15 - 6)3$

Math 7 Test
Chapter 2 Part 1

1. $4^3 \times 3^2 \div 4$
    a. 144   b. 18   c. 580   d. 200

2. $2(3+5)-6\div 2$
    a. 3   b. 13   c. 8   d. 10

3. $2(3)+5$
    a. 11   b. 13   c. 16   d. 18

4. $5+28\div 4$
    a. 16.5   b. 17   c. 10   d. 12

5. $5\cdot 6\div 3\cdot 2$
    a. 36   b. 30   c. 20   d. 24

6. $9(3+1)-8(5-2)$
    a. 12   b. -12   c. 14   d. -14

7. $(2+5)(10-6)$
    a. 11   b. 28   c. 30   d. 33

8. $3(6+1)$
    a. 19   b. 20   c. 21   d. 22

9. $21\div 3+(7)(4)$
    a. 30   b. 28   c. 52   d. 56

10. $45 - 8[2(3-1)]$

      a. 148   b. 132   c. 15   d. 13

11. $(10 + 8) \cdot 5 - 37$

17. $10 \cdot 7 - 12$

12. $5 \times (2^3 - 8) \cdot 5$

18. $(2 + 5)(3)$

19. $6 + 8 - 2$

13. $9 \times (2^3 \div 4 \times 5)$

20. $12 \cdot 3 - 8$

14. $8 \cdot 9 \div 3 \times 2$

21. 6^2

15. $(9)(26)$

22. $9 \times (2 \div 2 \times 5)$

16. $(5^3 + 7) \times 2$

23. $3^4 - 6 \div 2$

Name_____ Period_____ Date_____

CHAPTER 6 PRACTICE TEST

Solve for the variable.

1. $3x = 12$

2. $7a = 42$

3. $8g = 32$

4. $\dfrac{x}{3} = \dfrac{5}{15}$

5. $\dfrac{10}{b} = \dfrac{20}{8}$

6. $\dfrac{2}{3} = \dfrac{10}{w}$

7. $\dfrac{1}{3} = \dfrac{7}{y}$

8. $35 = 7k$

9. $80 = 20x$

Use the following to solve problems 10-13.
For every 9 fish you have, you need 3 gallons of water.

10. How many fish can you have if you have a tank that holds 21 gallons?

11. How many gallons of water do you have for 1 fish?

12. If you want 18 fish, how many gallons of water do you need?

Use the following to solve problems 14-16.
15 cars enter a parking lot every 5 minutes.

14.

Cars	Minutes
	6
15	5
	4

	3
	2
	1

15. How many cars enter the parking lot in 3 minutes?

16. How long does it take for 9 cars to enter the parking lot?

For problems 17-20, set up the proportion for each set of similar figures and solve for the missing side length.

17.

6 in

5 in

x inches

15 inches

18.

8 feet

x feet

4 feet

2 feet

19.

16 yards

8 yards

x yards

12 yards
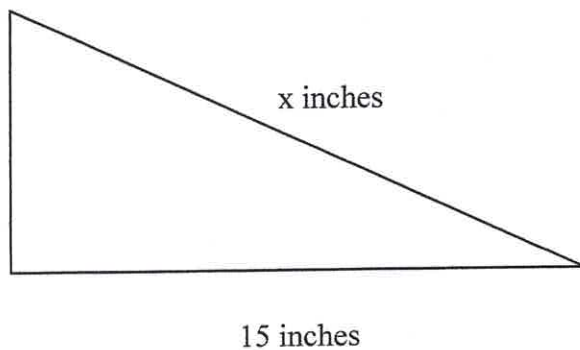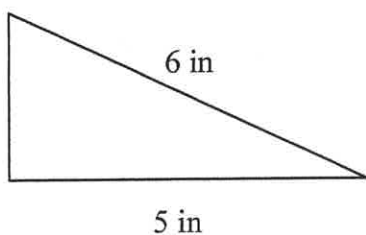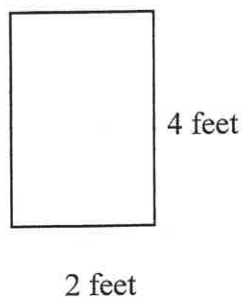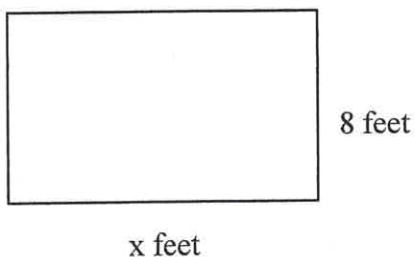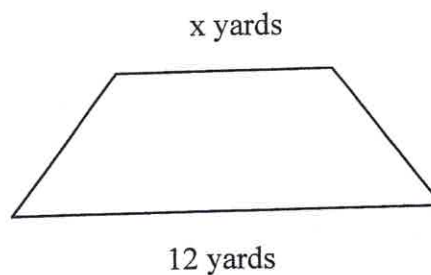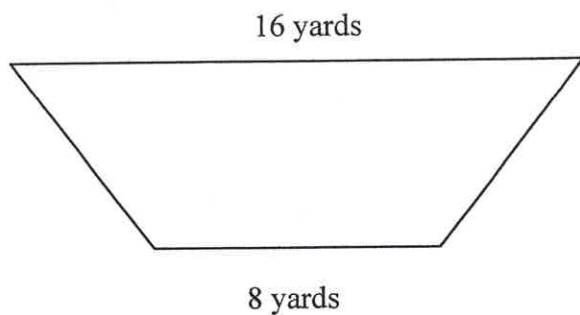
Two-Step Equations

Date_____ Period__

Solve each equation.

1) $6 = \dfrac{a}{4} + 2$

2) $-6 + \dfrac{x}{4} = -5$

3) $9x - 7 = -7$

4) $0 = 4 + \dfrac{n}{5}$

5) $-4 = \dfrac{r}{20} - 5$

6) $-1 = \dfrac{5 + x}{6}$

7) $\dfrac{v + 9}{3} = 8$

8) $2(n + 5) = -2$

9) $-9x + 1 = -80$

10) $-6 = \dfrac{n}{2} - 10$

11) $-2 = 2 + \dfrac{v}{4}$

12) $144 = -12(x + 5)$

c. Multi-step equations

1) $-20 = -4x - 6x$

2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

16) $3n - 5 = -8(6 + 5n)$

2. Inequalities

a. Graphing one-variable inequalities

Draw a graph for each inequality.

1) $n \leq -5$
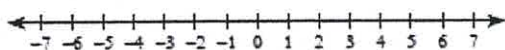
2) $n \leq 5$
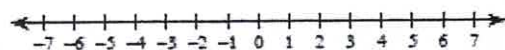
3) $x < 1$
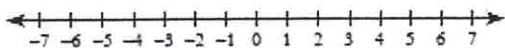
4) $r > 2$
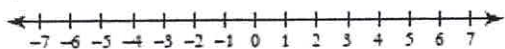
5) $n > 5$
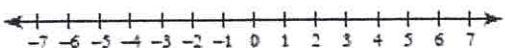
6) $r \leq -2$
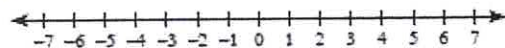
7) $k \leq -2$
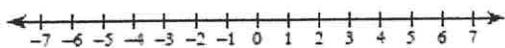
8) $m < -5$
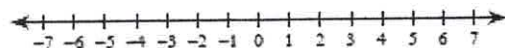
9) $x \geq 2$
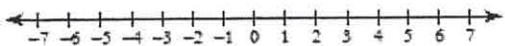
10) $-5 \geq v$
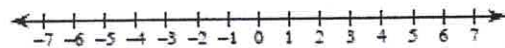
b. One-step inequalities

Solve each inequality and graph its solution.

1) $-12 > x - 7$
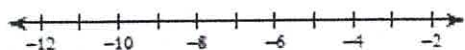
2) $-1 + r \geq 4$
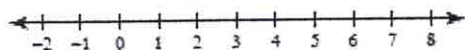
3) $n - 6 \leq -14$
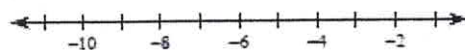
4) $b - 7 < -12$
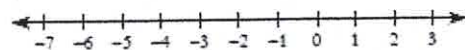
5) $a - 17 > -16$
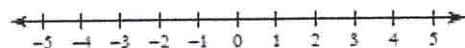
6) $15 + x \leq 0$
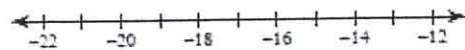
7) $3 + v \leq -9$
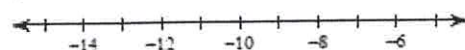
8) $8 \geq n - 6$
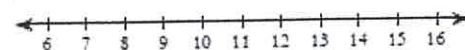
9) $-3x > 3$
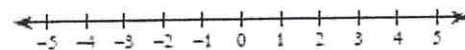
10) $\dfrac{n}{3} > 3$
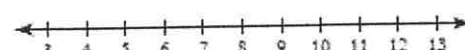
11) $\dfrac{k}{4} < -4$
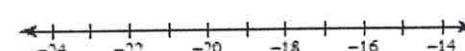
12) $-9x \geq -90$
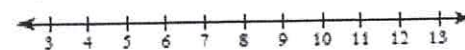
c. Two-step inequalities

Solve each inequality and graph its solution.

1) $2x + 4 \geq 24$
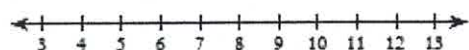
2) $\dfrac{m}{3} - 3 \leq -6$
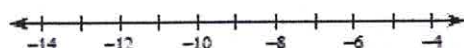
3) $-3(p + 1) \leq -18$
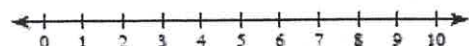
4) $-4(-4 + x) > 56$
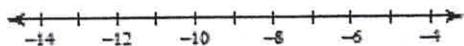
5) $-b - 2 > 8$
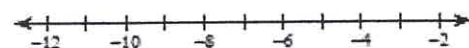
6) $-4(3 + n) > -32$
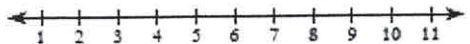
7) $4 + \dfrac{n}{3} < 6$
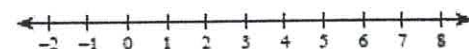
8) $-3(r - 4) \geq 0$
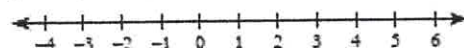
9) $-7x + 7 \leq -56$
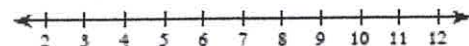
10) $-3(p - 7) \geq 21$
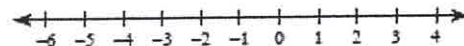
11) $-11x - 4 > -15$
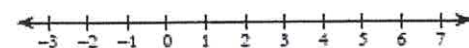
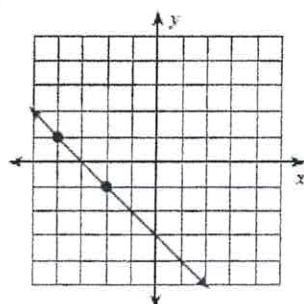12) $\dfrac{-9 + a}{15} > 1$
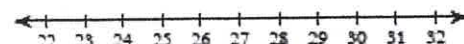
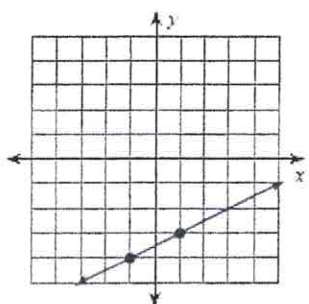# 3. Linear Equations and Inequalities
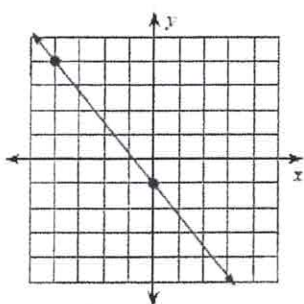
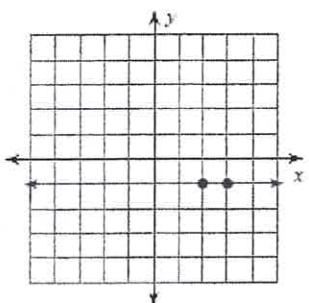## a. Finding slope from a graph
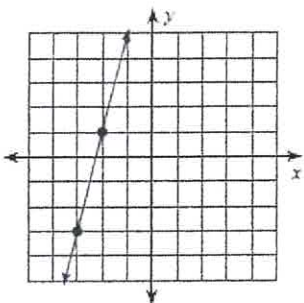
Find the slope of each line.

1)

2)

3)

4)

5)

6)

7)

8)