

NTI

7th

Grade

Day
8

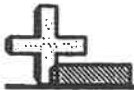
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The

Group

Day

7th Grade NTI Day #8



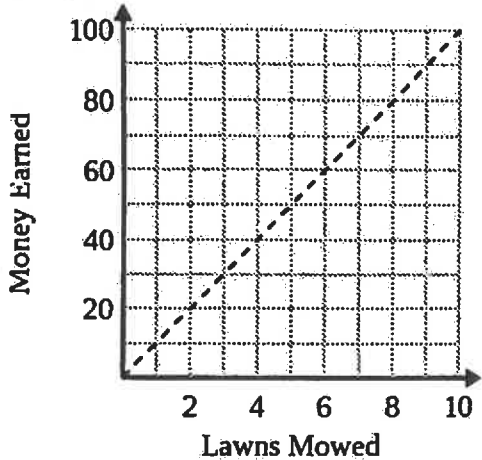
Examining Graphs

Name: _____

Determine which statements about the graph are true.

Answers

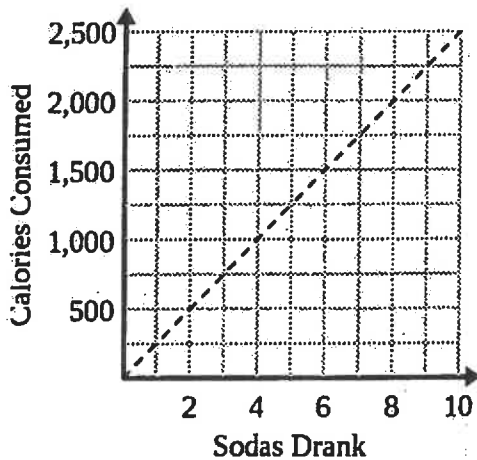
1)



- A. The point (3, 30) shows that you would earn \$30 for mowing 3 lawns.
- B. The point (90, 9) shows that you would earn \$90 for mowing 9 lawns.
- C. The point (1, 10) shows that mowing 1 lawn will earn you \$10.
- D. The point (10, 1) shows that mowing 1 lawn will earn you \$10.

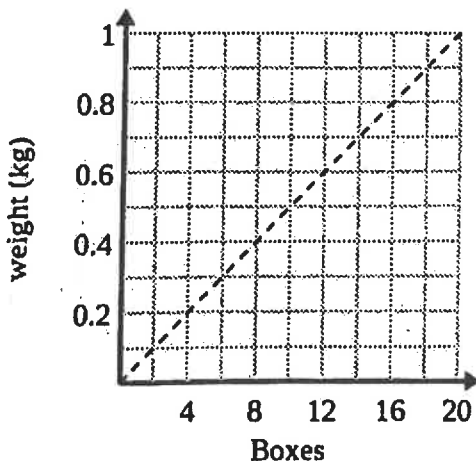
- 1. _____
- 2. _____
- 3. _____

2)



- A. The point (2, 500) shows that drinking 2 sodas will mean you consumed 500 calories.
- B. The point (1, 250) shows that drinking 1 soda will mean you consumed 250 calories.
- C. The point (1000, 4) shows that drinking 4 sodas will mean you consumed 1000 calories.
- D. The point (4, 1000) shows that to consume 1000 calories you'd have to drink 4 sodas.

3)



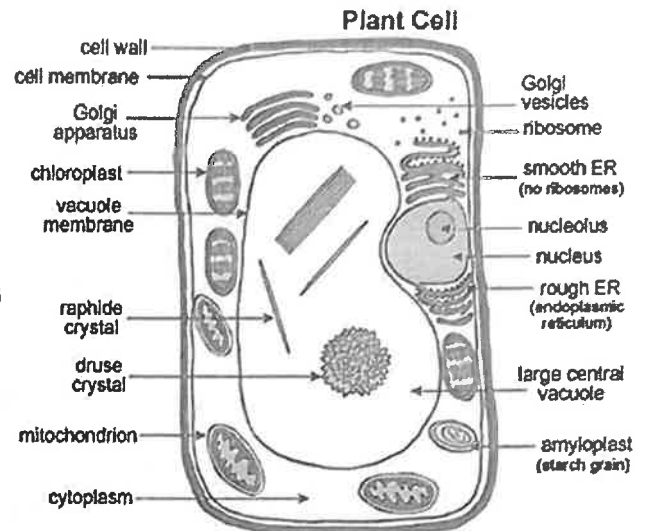
- A. The point (4, 0.2) shows that 0.2 kilograms is the weight of 4 boxes.
- B. The point (12, 0.6) shows that 12 boxes weigh 0.6 kilograms.
- C. The point (0.5, 10) shows that 0.5 kilograms is the weight of 10 boxes.
- D. The point (16, 0.8) shows that 16 boxes weigh 0.8 kilograms.

Name: _____

Lesson 18 *7th - NTI Day 8*

Cell Parts and Functions

Let's embark on a journey through the miniature world of cells. Have you ever considered what connects us to all living creatures, from a tiny blade of grass to an enormous elephant? The common thread linking all life forms is the cell. At first glance, you might think that the cells of a plant and a human being have nothing in common, but that's not quite right. If you take a closer look, you'll find that we share many similarities on this cellular level.



There are three key elements that all plant and animal cells have in common. First, each cell is enveloped in a thin barrier called the **cell membrane**. Just like the skin protects our body, the cell membrane safeguards the cell. Not only does it maintain the cell's shape, but it also regulates the entry and exit of materials.

The second commonality is the **nucleus**, the cell's command center. It's usually located near the center of the cell, resembling a round or oval pearl that stands out due to its darker color. Inside the nucleus is the DNA, the blueprint of life. This genetic material controls every activity within the cell, orchestrating a symphony of life processes.

The third element that both plant and animal cells share is the **cytoplasm**. This is a gel-like substance, primarily composed of water, that fills up the space inside the cell membrane. Imagine it as a bustling city where proteins and nutrients are constantly transported, and **cell organelles** (little organs) reside.

In humans and animals, a diversity of cell shapes and sizes exist, amounting to trillions of cells. Each one of these cells features a unique nucleus membrane, which serves as the ultimate security system to protect the precious DNA and various sophisticated organelles.

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To understand how cells work, think of them as miniature factories. Each factory component, or organelle, has a distinct role, ensuring the cell operates efficiently.

One crucial organelle is called **mitochondria**. These tiny rod-shaped powerhouses transform the chemical energy from food into a form that the cell can use, just like a power plant providing electricity for a city.

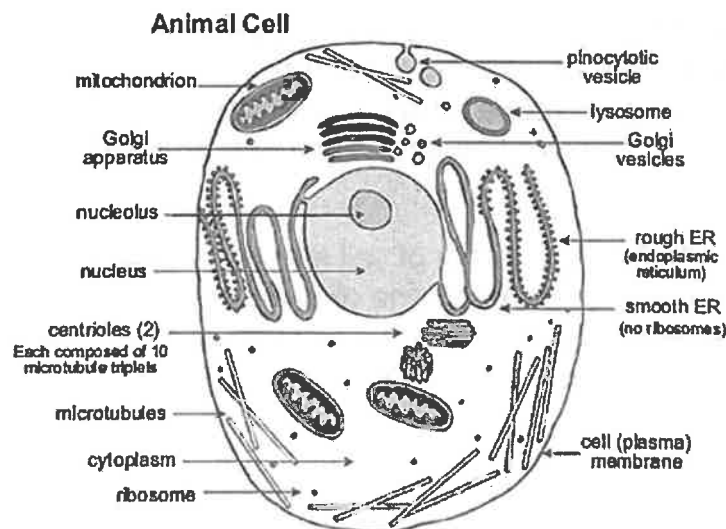
The **vacuoles** serve as the cell's storage units, much like warehouses. They store food, water, and waste, assist in digestion, and act as the cell's defense system, eliminating harmful bacteria or viruses.

Ribosomes, another key player, are the cell's builders. They construct proteins, the cell's essential building blocks, following instructions from the nucleus. Ribosomes usually sit on the edges of the cell's transport system, known as the **endoplasmic reticulum**.

Lysosomes act as the cell's recycling center. They contain potent chemicals that decompose harmful substances and recycle worn-out cell components.

While plant and animal cells share a lot in common, plant cells have two unique features. The first is a rigid structure called the cell wall, which provides extra support to the cell. The second is chloroplasts, small green bodies that allow plants to produce their own food primarily from sunlight, like a little solar panel in each cell.

So, while at first glance, our cells might seem worlds apart from a plant's, on a closer look, we're not that different after all. Each cell, whether in a blade of grass or a human being, is a marvel of nature's design, working tirelessly to sustain life.



Name: _____

Lesson 18 *7th - Day 8*

Cell Parts and Functions

1. What are all plants and animals made up of?

- A. Cells
- B. Proteins
- C. DNA
- D. Organisms

2. What is the role of a cell membrane?

- A. To protect the cell and control the movement of materials
- B. To produce energy for the cell
- C. To store food and water for the cell
- D. To recycle worn-out cell parts

3. What is the job of the nucleus in a cell?

- A. To store food, water, and waste
- B. To break down harmful molecules
- C. To control all cell activities
- D. To convert the chemical energy of food into a form that the cell can use

4. What is the cytoplasm primarily made up of?

- A. DNA
- B. Water
- C. Proteins
- D. Nutrients

5. What do the mitochondria do in the cells?

- A. Control all cell activities
- B. Store food, water, and waste
- C. Convert the chemical energy of food into a form that the cell can use
- D. Break down harmful molecules and recycle worn-out cell parts

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Cell Parts and Functions

6. What role do ribosomes play in the cell?

- A. They control all cell activities
- B. They make protein for the cell
- C. They convert the chemical energy of food into a form that the cell can use
- D. They store food, water, and waste

7. What is the function of vacuoles in the cell?

- A. Control all cell activities
- B. Break down harmful molecules and recycle worn-out cell parts
- C. Store food, water, and waste
- D. Make protein for the cell

8. What is the purpose of lysosomes in a cell?

- A. Store food, water, and waste
- B. Control all cell activities
- C. Convert the chemical energy of food into a form that the cell can use
- D. Break down harmful molecules and recycle worn-out cell parts

9. What unique feature do plant cells have?

- A. Cell walls and chloroplasts
- B. Vacuoles and ribosomes
- C. Mitochondria and lysosomes
- D. Cytoplasm and cell membrane

10. What role do chloroplasts play in a plant cell?

- A. They store food, water, and waste
- B. They make protein for the cell
- C. They convert the chemical energy of food into a form that the cell can use
- D. They allow the plant to make its own food primarily from sunlight

Lesson #8

Getting Down to Business

So glad to meet you, Saint George," reiterated the dragon, rather nervously.

"You've been a great traveler, I hear, and I've always been rather a stay-at-home. But I can show you many antiquities and interesting features of our countryside, if you're stopping here anytime—"

"I think," said Saint George, in his frank, pleasant way, "that we'd really better take the advice of our young friend here and try to come to some understanding, on a business footing, about this little affair of ours. Now don't you think that after all, the simplest plan would be just to fight it out according to the rules, and let the best man win? They're betting on you, down in the village, but I don't mind that!"

"Oh, yes, *do*, dragon," said the Boy, delightedly! "It'll save such a lot of bother!"

"My young friend, please shut up," said the dragon, severely. "Believe me, Saint George," he went on, "there's nobody in the world I'd sooner oblige than you and this young gentleman here. But the whole thing's nonsense, and conventionality, and popular thick-headedness. There's absolutely nothing to fight about, from beginning to end. And anyhow I'm not going to, so that settles it!"

"But supposing I make you?" said Saint George, rather nettled.

"You can't," said the dragon, triumphantly. "I'd only go into my cave and retire for a time down the hole I came up. You'd soon get heartily sick of sitting outside and waiting for me to come out and fight you. And as soon as you'd really gone, I'd come up again. Frankly, I like this place, and I'm going to stay here!"

Saint George gazed for a while on the fair landscape around them.

"But this would be a beautiful place for a fight," he began again persuasively. "These rolling Downs for the arena—and me in my golden armor up against your big blue scaly coils! Think what a picture it would make!"

"Now you're trying to get to me through my artistic sensibilities," said the dragon. "But it won't work. Not that it wouldn't make a lovely picture, as you say," he added, wavering a little.

"We seem to be getting rather nearer to *business*," put in the Boy. "You must see, dragon, that there's got to be a fight of some sort, 'cuz you can't want to have to go down that dirty old hole again until goodness knows when."



- L.7.4 1. From the context clues, you can tell that *wavering a little* means the dragon was _____.
- | | |
|---|----------------------------------|
| A) trembling fiercely as he spoke | C) signaling to the Boy for help |
| B) having second thoughts about the fight | D) trying to steady himself |

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- RL.7.4 2. When the dragon says, "there's nobody in the world I'd sooner oblige," he means there is no one else he would _____.
- A) excuse from a task
 - B) fight and defeat
 - C) rather do a favor for
 - D) like to meet sooner

RL.7.4 3. Match each word with its clue.

- | | |
|-----------------------|-------------------------------------|
| _____ reiterate | A) accepted way of doing things |
| _____ antiquities | B) wholly; deeply |
| _____ conventionality | C) awareness; ability to appreciate |
| _____ heartily | D) convincingly |
| _____ persuasively | E) relics; artifacts |
| _____ sensibilities | F) say again |

- RL.7.1 4. In the end, Saint George appeals to the dragon's _____ to convince him to fight.
- pride in himself fear of failure love of beauty sense of shame

In the text, underline evidence that supports your answer.

- RL.7.1 5. What argument does the Boy use to convince the dragon to fight Saint George?
- A) tells the dragon that the villagers are betting on him
 - B) flatters the dragon, saying he would make a stunning combatant
 - C) offers the dragon a reward if he can beat Saint George
 - D) reminds the dragon he doesn't really want to go back down the hole

- RL.7.3 6. In this part of the story, which character "takes the moral high ground" (makes his decision based on what is right and honest)?

the Boy Saint George the dragon all of these

Explain your answer.

- RL.7.1 7. Why does the dragon tell the Boy, "shut up"?
- A) The Boy is encouraging him to return to his cave until it all blows over.
 - B) The Boy tells him he is betting on Saint George.
 - C) The Boy agrees with Saint George that the fight should happen according to the rules.
 - D) The Boy tells the dragon that the villagers want him dead.