

Grade 3 – Math

This task requires a student to solve a word problem involving addition and subtraction of time intervals in minutes.

QUESTION:

Patricia needs to read for 120 minutes each week.

- She read for 26 minutes on Monday.
- She read for 39 minutes on Tuesday.
- She read for 38 minutes on Thursday

How many more minutes does Patricia need to read this week?

(ANSWER: 17 minutes)

Grade 3 – Math

This task requires students to use their understanding of the four operations to solve a real-world problem, first by adding to determine a total number of tiles and then determining how those tiles can be displayed in a rectangular array on a 10 x 10 grid.

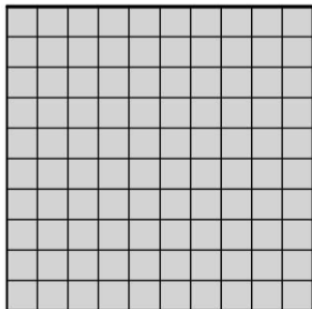
QUESTIONS:

An art teacher will tile a section of the wall with painted tiles made by students in three art classes.

- Class A made 18 tiles.
- Class B made 14 tiles.
- Class C made 16 tiles.

Part A: What is the total number of tiles that are to be used? (ANSWER: 48 tiles)

Part B: The grid shows how much wall space the art teacher can use. Use the grid to create a rectangular array showing how the art teacher might arrange tiles on the wall. Select the boxes to shade them. Each tile should be shown by one shaded box. (ANSWER: An 8X6 OR 6X8 rectangle)



Part C: Andy created a rectangular array showing how he would place 56 small tiles on the wall. He placed 7 tiles in each row. He wrote a multiplication equation using R to stand for the number of rows he used.

Write an equation using R that Andy could have written.

(ANSWER: There are a number of possible variations on the equation $7 \times R = 56$)

Grade 3 – English Language Arts

This task asks students to read a passage and then answer the questions below using evidence in the text to make and support claims.

Read the excerpt from *Eliza's Cherry Trees: Japan's Gift to America* by Andrea Zimmerman. Then answer these questions.

QUESTIONS:

Part A: The article includes these details about Eliza's life:

- She wrote newspaper articles to tell others about what she saw in Alaska to inform those who had not been there.
- She wrote the first guidebook about Alaska.
- She was the first woman to work at the National Geographic Society, where she wrote many articles and books.

What do these details show about Eliza? (One correct answer)

- A. They show that she shared the benefits of her experiences with others.
- B. They show she had many important jobs during her lifetime, but becoming a photographer was one of her proudest moments.
- C. They show that her earlier travels were more exciting than the work she did later in life.
- D. They show that she had a careful plan for everything she did in her life.

(ANSWER: Option A)

Grade 3 – English Language Arts

This task asks students to read a passage and determine how events depicted are related to each other and use evidence from the text to prove their answer.

Read the excerpt below from *Eliza's Cherry Trees: Japan's Gift to America* by Andrea Zimmerman. Then answer these questions.

QUESTIONS:

Part A: Read paragraphs 13-15.

Paragraphs 13-15:

13. But Eliza didn't forget about the cherry trees, and she didn't give up. She kept trying for more than twenty years! Every time a new man was hired to be in charge of the parks department, Eliza went to tell him about her idea. Each one said no.

14. In 1909, William Howard Taft had just been elected president. Eliza had another good idea. She knew that sometimes people in politics could help get things done. She wrote a letter to the president's wife, Mrs. Taft. Eliza told Mrs. Taft about her plan to make Washington more beautiful with the lovely cherry trees. She was afraid the answer would be no again.

15. But Mrs. Taft loved the idea! With the help of Mr. Takamine, a generous Japanese scientist, they had the trees sent from Japan.

Which statement best describes how the events in these paragraphs are related to each other?

- A. They explain how Washington, D.C., would change if cherry trees were planted around the city.
- B. They show that Eliza found a new way to get cherry trees planted in Washington, D.C.
- C. They compare the ways Eliza and Mrs. Taft tried to add beauty to Washington, D.C.
- D. They describe how Mr. Takamine gave Eliza the idea to bring cherry trees to Washington, D.C.

(ANSWER: Option B)

Grade 4 – Math

This task will ask students to solve a multi-step word problem appropriate to Grade 4 involving knowledge of the four operations with whole numbers.

QUESTIONS:

Ms. Morales has a bag of beads.

- She gives Elena 5 beads.
- She gives Damian 8 more beads than Elena.
- She gives Trish 4 times as many beads as Damian.

Ms. Morales has 10 beads left in the bag.

PART A: How many beads did Damian and Trish each receive? Show or explain how you arrived at each answer. (ANSWER: Elena – 5 beads, Damian – 13 beads, Trish – 52 beads)

PART B: How many beads were in Ms. Morales' bag before any beads were given to students? (ANSWER: 80 beads)

Grade 4 – Math

This task asks students to subtract multi-digit whole numbers using the standard algorithm.

QUESTION:

Complete the subtraction problem by writing the answer in the box.

$$7263 - 2792 = \underline{\quad}$$

(ANSWER: 4471)

Grade 4 – English Language Arts

This task asks students to read a passage and consider how the author built the theme of the story.

Read the passage “Kira-Kira” by Cynthia Kadohata. Then answer these questions.

Paragraphs 1-2:

1. My sister, Lynn, taught me my first word: *kira-kira*. I pronounced it *ka-a-ahhh*, but she knew what I meant. *Kira-Kira* means “glittering” in Japanese. Lynn told me that when I was a baby, she used to take me onto our empty road at night, where we would lie on our backs and look at the stars while she said over and over, “Katie, say ‘*kira-kira, kira-kira*.’” I loved that word! When I grew older, I used *kira-kira* to describe everything I liked: the beautiful blue sky, puppies, kittens, butterflies, colored Kleenex.

2. My mother said we were misusing the word; you could not call a Kleenex *kira-kira*. She was dismayed over how un-Japanese we were and vowed to send us to Japan one day. I didn’t care where she sent me, so long as Lynn came along.

QUESTIONS:

Part A: How are the events in paragraphs 1 and 2 important to the theme of the story?

- A. They list the many lessons that Lynn taught her younger sister, Katie.
- B. They explain that Katie’s family had very high expectations of her when she was young.
- C. They show how strong the relationship is between Katie and Lynn.
- D. They introduce the idea that Katie and Lynn want to learn more about the Japanese language.

(ANSWER: Option C)

Part B: Which sentence from the story provides the best support for the answer in Part A?

- A. “My sister, Lynn, taught me my first word: *kira-kira*.”
- B. “When I grew older, I used *kira-kira* to describe everything I liked: the beautiful blue sky, puppies, kittens, butterflies, colored Kleenex.”
- C. “She was dismayed over how un-Japanese we were and vowed to send us to Japan one day.”
- D. “I didn’t care where she sent me, so long as Lynn came along.”

(ANSWER: Option D)

Grade 4 – English Language Arts

This task asks students to read a passage and use context clues to determine the author’s meaning of unfamiliar vocabulary words. Additionally, the task asks students to use a targeted sentence to indicate a second meaning for the unfamiliar vocabulary word.

Read the passage “Kira-Kira” by Cynthia Kadohata.
Then answer these questions.

QUESTIONS:

Part A: What is the meaning of the word **constantly** as the narrator uses it in paragraph 4 of *Kira-Kira*?

Paragraph 4: I like to see how her memories were the same as mine, but also different. For instance, one of my earliest memories is of the day Lynn saved my life. I was almost five, and she was almost nine. We were playing on the empty road near our house. Fields of tall corn stretched into the distance wherever you looked. A dirty gray dog ran out of the field near us, and then he ran back in. Lynn loved animals. Her long black hair disappeared into the corn as she chased the dog. The summer sky was clear and blue. I felt a brief fear as Lynn disappeared into the cornstalks. When she wasn't in school, she stayed with me constantly. Both our parents worked. Officially, I stayed all day with a lady from down the road, but unofficially, Lynn was the one who took care of me.

Constantly means...

- A. often
- B. all the time
- C. once in a while
- D. sometimes

(ANSWER: Option B)

Part B: Which detail from *Kira-Kira* uses a word or phrase that also means **constantly**?

- A. "Lynn told me that when I was a baby, she used to take me onto our empty road at night, where we would lie on our backs and look at the stars while she said over and over, "Katie, say 'kira-kira, kira-kira.'"
- B. "She was dismayed over how un-Japanese we were and vowed to send us to Japan one day."
- C. "The blue of the sky is one of the most special colors in the world, because the color is deep but see-through both at the same time."
- D. "The dog burst from the field suddenly, growling and snarling."

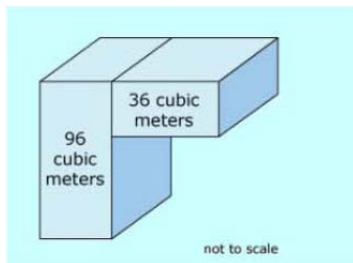
(ANSWER: Option A)

Grade 5 – Math

This task requires students to solve a real world problem involving the total volume of two objects.

QUESTIONS:

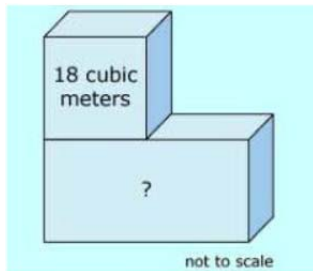
A large tank at the state aquarium is shown. There are two rectangle prisms which form the large tank.



PART A: What is the volume of the large tank?

(ANSWER: $96 + 36 = 132$ cubic meters)

PART B: The scientists are creating a second large tank that is also made from two rectangular prisms. The second tank has the same volume as the first tank.



What is the volume of the rectangular prism on the bottom?
(ANSWER: $132 - 18 = 114$ cubic meters)

Grade 5 – Math

This task requires students to solve a real world problem involving the addition and subtraction of fractions.

QUESTIONS:

Mr. Edmunds shared 12 pencils among his four sons as follows:

- Alan received $\frac{1}{3}$ of the pencils.
- Bill received $\frac{1}{4}$ of the pencils.
- Carl received more than 1 pencil.
- David received more pencils than Carl.

PART A: What is the fraction of the total number of pencils that was given to both Alan and Bill combined?
(ANSWER: $\frac{7}{12}$ ths)

PART B: What Fraction of the total number of pencils did Carl and David each receive? Justify your answer.
(ANSWER: Alan and Bill received 7 pencils so Carl and David received 5 pencils, $12 - 7 = 5$ pencils. Carl received 2 pencils and David received 3 pencils. So Carl received $\frac{2}{12}$ th of the pencils and David received $\frac{3}{12}$ th of the pencils.)

Grade 5 – English Language Arts

This task asks students to read a passage and use context clues to determine the author's meaning of unfamiliar vocabulary words. Additionally, the task asks students to use a targeted phrase to understand the meaning of the unfamiliar vocabulary word.

Read the passage "Life in the Limbs" by Heather Kaufman-Peters. Then answer these questions.

QUESTIONS:

Paragraphs 22-23:

22. *Jack*: How do you determine the shape of a tree house?

23. *Pete*: The trees will dictate how a floor plan lays out. Often these are unusual shapes. My tree houses tend to be square because it is less expensive to build square. If someone has all the time in the world to design a tree house, then I would make it wacky and fun!

Part A: What is the meaning of the word **dictate** as it is used in paragraph 23?

- A. hint
- B. fix
- C. understand
- D. decide

(ANSWER: Option D)

Part B: Which phrase helps the reader understand the meaning of **dictate**?

- A. "recreate the tree house"
- B. "determine the shape"
- C. "is less expensive to build"
- D. "has all the time in the world"

(ANSWER: Option B)

Grade 5 – English Language Arts

This task asks students to read a paragraph in a passage, determine the meaning of a key word, and identify evidence in the text that supports their answer.

Read the passage "Life in the Limbs" by Heather Kaufman-Peters. Then answer these questions.

Paragraph 6: "If you want a bigger tree house than the tree can support," he adds, "you can use braces. My tree house is in two trees—an oak and a fir—and has three posts to support the weight."

QUESTION:

Part A: What is the purpose of the braces described in paragraph 6 of the article?

- A. They fix broken tree limbs, so a tree house will not fall down.
- B. They lock several trees together, so almost any kind of tree can be used.
- C. They join two trees into one unit, so a tree house looks secure.
- D. They help trees hold up a tree house, so the trees will not break.

(ANSWER: Option D)

Part B: Which two details from the article help support the answer to Part A?

- A. "Designing unique tree houses may sound tough, but Jonathan says it's no sweat."
- B. "'Hardwoods such as oak, maple, or hickory make the best trees for houses – but I did once build a wonderful tree house in a crabapple tree.'"

C. "My tree house is in two trees – an oak and a fir – and has three posts to support the weight."

D. "As a certified arborist, Jonathan tries to never harm the trees."

E. "The tree's center of gravity is at the top and the ends of its branches, so I build a house down at the center of the tree..."

F. "The tree grows over the artificial limbs, and they become part of the tree..."

(ANSWER: Options C&D)

Grade 6 – Math

This task requires students to solve a real-world problem using an understanding of ratios and rate reasoning.

QUESTION:

Mr. Ruiz is starting a marching band at his school. He first does research and finds the following data about other local marching bands.

	Band 1	Band 2	Band 3
Number of Brass Instrument Players	123	42	150
Number of Percussion Instrument Players	41	14	50

Part A: Mr. Ruiz realized that there are _____ brass instrument players per percussion player.
(ANSWER: 3 brass instrument players per percussion player)

Part B: Mr. Ruiz has 210 students who are interested in joining the marching band. He decides to have 80% of the band be made up of percussion and brass instruments. Use the unit rate you found in Part A to determine how many students should play brass instruments.

Show or explain all your steps.

(ANSWER: 126 students should play brass instruments)

Grade 6 – Math

This task requires students to solve a real-world problem by writing and solving equations relating to the information given in the question.

QUESTIONS:

Kelvin ran a 100-meter race at an average speed of v meters per second. He completed the race in 12.5 seconds.

Part A: Create an equation that can be used to find v .

(ANSWER: $v \times 12.5 = 100$ is one of a various possible equations)

Part B: What was Kelvin’s average running speed, in meters-per-second?
(ANSWER: 8 meters per second)

Grade 7 – Math

This task requires students to use proportional relationships to solve multi-step ratio problems.

QUESTION:

On Friday, three friends shared how much they read during the week.

- Barbara read the first 100 pages from a 320-page book in the last 4 days.
- Colleen read the first 54 pages from a 260-page book in the last 3 days.
- Nancy read the first 160 pages from a 480-page book in the last 5 days.

A person’s average reading rate can be defined as the number of pages read divided by the number of days. Place the three friends’ reading rates in order from greatest to least.

(ANSWER: Nancy, Barbara, Colleen)

Grade 7 – English Language Arts

This task requires students to use phrases or quotes to determine the meaning of a paragraph in the text and relate that meaning to an additional paragraph in the text.

Read the text "The Biography of Amelia Earhart." Then answer these questions.

QUESTIONS:

Part A: In paragraph 6 of “The Biography of Amelia Earhart,” Earhart is quoted as saying, “**After scaring most of the cows in the neighborhood...I pulled up in a farmer’s backyard.**” How does the quotation contribute to the meaning of the paragraph?

- A. It demonstrates Earhart’s calm sense of humor when describing a potentially frightening situation.
- B. It shows that Earhart loved taking risks but regretted when her actions put others in danger.
- C. It suggests that Earhart was humble about her accomplishments and able to admit mistakes.
- D. It illustrates Earhart’s awareness of her responsibility as a role model for other women.

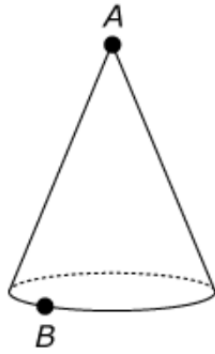
(ANSWER: Option A)

Grade 8 – Math

This task requires students to apply the Pythagorean Theorem ($a^2 + b^2 = c^2$) to determine unknown side lengths in right triangles in real-world problems in two and three dimensions.

QUESTION:

A right circular cone is shown in the figure. Point *A* is the vertex of the cone and point *B* lies on the circumference of the base of the cone.



The cone has a height of 24 units and a diameter of 20 units. What is the distance from point *A* to point *B*?

(ANSWER: 26 units).

Methodology: Apply the Pythagorean Theorem – $a^2 + b^2 = c^2$ – to determine unknown side lengths in right triangles.

$$a^2 + b^2 = c^2$$

a = the height of the cone (24 units)

b = half of the diameter of the base of the cone (10 units)

$$\text{So: } 24^2 + 10^2 = c^2$$

$$576 + 100 = c^2$$

$$676 = c^2$$

$$26 = c$$

Grade 8 – English Language Arts

This task requires students to read a passage and use context clues to determine the author's meaning of unfamiliar vocabulary words.

Read the text from "*Brian's Winter*" and then answer these questions.

Paragraph 21: But in reality, the bear was not his primary adversary. Nor was the wolf, nor any animal. Brian had become his own worst enemy because in all the business of hunting, fishing and surviving he had forgotten the primary rule: *Always, always* pay attention to what was happening. Everything in nature means something and he had missed the warnings that summer was ending, had in many ways already ended, and what was coming would be the most dangerous thing he had faced since the plane crash.

QUESTIONS:

Part A: What is the meaning of the word **adversary** as it is used in paragraph 21?

- A. problem's solution
- B. indication of trouble
- C. opposing force
- D. source of irritation

(ANSWER: Option C)

Part B: Which phrase from paragraph 21 best helps clarify the meaning of **adversary**?

- A. "own worst enemy"
- B. "the primary rule"
- C. "missed the warnings"
- D. "most dangerous thing"

(ANSWER: Option A)