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Which group of sentences best summarizes the passage?

A. McMurdo Station in Antarctica has partnered with Scott Base in New Zealand to help manage the use of energy in Antarctica. The two bases share energy to reduce the amount of waste.

B. Antarctica is different from other continents. The supplies that are needed at McMurdo Station are brought from other continents. Even the water must go through a special process before people are able to drink the water.

C. Creative ideas are needed for people in Antarctica to get the things they need. The U.S. Antarctic Program helps by determining how the power and water supplies are used and how waste is treated at McMurdo Station to protect the environment of Antarctica.

D. It is important to be committed to reducing the amount of waste created when staying at McMurdo Station because all waste must be moved off Antarctica. Ships bring researchers what they need, but they also take back recycled materials, such as glass, plastic, metal, and paper.
This question has two parts. First, answer Part A. Then, answer Part B.

**Part A**
Why does the author include information in *What’s on the Cargo Ships?*

A) to give an opinion about visiting the McMurdo Station  

B) to identify the main differences between the summer and the winter in Antarctica  

C) to explain how ships are used to carry supplies while also reducing waste in Antarctica  

D) to give information about what kinds of supplies are mainly transported to McMurdo Station

**Part B**
Choose two sentences that best support your answer in Part A.

“There is one ship that brings fuel and another ship that brings cargo. The cargo ship takes back all of the waste, from construction materials to glass, paper, plastic, and metal that has been carefully recycled. . . . It takes 10 days to unload and reload the cargo ship and about 40 hours to unload the fuel. All fuel and supplies must be delivered during the short Antarctic summer. Nothing comes in or goes out during the long, dark Antarctic winter.” (paragraph 6)
What does the author mean by stating that McMurdo Station has helped reduce its footprint in Antarctica?

- The amount of waste left behind by people in Antarctica has decreased.
- The amount of energy used at McMurdo Station has been adjusted to meet needs.
- The scientists have removed information that indicates people have been in Antarctica.
- The researchers at McMurdo Station have left fewer impressions in the ground when walking.
How does the interaction between Carrie and the other girls in Passage 1 develop Carrie’s point of view?

- It highlights Carrie’s frustration and fatigue by showing that the other girls feel sorry for her.
- It focuses on Carrie’s excitement at her new job by comparing it to the other girls’ annoyance at their work.
- It explains how grateful Carrie is for the other girls’ help and how quickly she is accepted into the group.
- It emphasizes Carrie’s reluctance to work by explaining that the other girls feel discouraged by the difficult conditions.
How do Carrie (Passage 1) and Lucy (Passage 2) each react to the machinery?

A. Carrie feels powerful as she works with machines while Lucy is scared of the mill’s machinery.

B. Carrie is intimidated by the machinery’s size while Lucy is comfortable around the large machinery.

C. Carrie ignores the noise of the machinery while Lucy cannot escape how disruptive the loud noise is to her work.

D. Carrie at first is calmed by the rhythms of the machinery while Lucy retreats into her thoughts to find relief from her work.
Read this sentence from Passage 1.

“The girls at her left and right realised her predicament and feelings, and, in a way, tried to aid her, as much as they dared, by working slower.” (paragraph 1)

What does the word predicament mean as it is used in this sentence?

A. poor effort  
B. hasty reaction  
C. difficult situation  
D. growing confusion
Read this paragraph from Passage 2.

15 In the autobiography she wrote near the end of her life, Lucy emphasized that she never regretted her years working as a mill girl. "I had early been saved from a great mistake; for it is the greatest of mistakes to begin life with the expectation that it is going to be easy, or with the wish to have it so. What a world it would be, if there were no hills to climb!"

How does the author’s representation of Carrie in Passage 1 contrast with the way Lucy recalls her experience in Passage 2?

- Carrie has lived a difficult life and feels she has finally found suitable work, but Lucy seeks to distract herself from the tasks at hand.
- Carrie expects her job to be easier and is disappointed when it is not, whereas Lucy feels satisfied with learning a new set of skills.
- Carrie wants to succeed at her new job so she can live an easier life, but Lucy relishes the labor for its own rewards.
- Carrie endures the work as it occurs, whereas Lucy views it from afar as a hardship she learned from.
Select two elements of the setting that have an impact on Carrie in Passage 1.

- "It had a thick odour of fresh leather . . ." (paragraph 2)
- "As the morning wore on the room became hotter." (paragraph 3)
- "The stool she sat on was without a back or foot-rest . . ." (paragraph 3)
- "In an instant there was a buzz of action and conversation." (paragraph 7)
- "The whirling wheels began to sing in a steadily modifying key . . ." (paragraph 7)
This question has two parts. First, answer Part A. Then, answer Part B.

**Part A**
What is the meaning of the phrase “hills to climb” as it is used in paragraph 15 of Passage 2?

A) difficult tasks  
B) lingering sadness  
C) different opinions  
D) enormous missteps

**Part B**
Select the detail that supports the answer in Part A.

15    In the autobiography she wrote near the end of her life, Lucy emphasized that she never regretted her years working as a mill girl. “I had early been saved from a great mistake; for it is the greatest of mistakes to begin life with the expectation that it is going to be easy; or with the wish to have it so. What a world it would be, if there were no hills to climb!”
### Indiana Department of Education

**ILEARN English/Language Arts (ELA) Item Key – Grade 7**

<table>
<thead>
<tr>
<th>Item</th>
<th>DOK</th>
<th>Standard(s)</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>3</td>
<td>7.W.4</td>
<td></td>
</tr>
</tbody>
</table>

**Score: 2**
- provides appropriate and mainly specific descriptive details and/or dialogue
- provides adequate development of experiences, characters, setting, action, and/or events
- uses adequate sensory, concrete, and/or figurative language
- is mostly “shown”

**Score: 1**
- provides mostly general descriptive details and little or no dialogue, and may include extraneous details that are unrelated or only loosely related
- provides limited development of experiences, characters, setting, action, and/or events
- uses limited sensory, concrete, and/or figurative language
- is somewhat “told”

**Score: 0**
- includes few if any descriptive details and little or no dialogue. Details that are included may be vague, repetitive, incorrect, or interfere with the meaning of the narrative
- provides minimal, if any, development of experiences, characters, setting, action, and/or events
- uses little or no sensory, concrete, and/or figurative language
- is mostly “told”
A student is writing a narrative for a literary magazine about two friends on a hot day. Read the draft of the introduction and complete the task that follows.

A Hot Day

Joe lounged outside under a tree, the only area having a significant amount of shade. It was only 9:00 a.m., but the temperature had already passed the 80-degree mark and was rising rapidly. Weather forecasters on the news programs had predicted that the heat wave would continue through the next couple of days. They had even provided safety precautions to take during times of high temperatures. Listeners had been advised to exercise only in the early morning hours and in the late evening hours. They had also been instructed to drink a large quantity of water to stay hydrated. Joe was still debating what activity he wanted to do when his friend George arrived.

Write the dialogue that might have occurred when George walked up to Joe.

...
ILEARN
English/Language Arts (ELA)
Performance Task Item Answer Key
Explain how the table in Source #1 supports information provided in the two other sources. Cite evidence and identify the source of each piece of information by title or number.

**Rubric**

**Score: 2**
Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources and that explains how each example supports the idea. Student cites the source for each example.

**Score: 1**
Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources but doesn’t explain how each example supports the idea. Student cites the sources.
OR
Response is an evidence-based explanation of how the table supports only one of the sources with two pieces of evidence from a single source and that explains how that example supports the idea. Student cites the source.
OR
Response is an evidence-based explanation of how the table supports only one of the sources with only one piece of evidence from a single source and that explains how that example supports the idea. Student cites the source.
OR
Response is an evidence-based explanation of how the table supports two other sources with two pieces of evidence from different sources and that explains how each example supports the idea. Student does not cite sources.

**Score: 0**
Response is an explanation that is incorrect, irrelevant, insufficient, or blank.
The table in Source #1 shows the amount of sleep that people of different age groups need every day to function well. This supports the claim in Source #2 that says everyone has an internal clock that follows day and night patterns. If your internal clock gets out of sync because of your habits, your sleep patterns will get messed up and you don't get the good night's sleep your body needs. In Source #3 a 12-year-old middle school student says she gets 8 hours of sleep a night and feels tired after school. Long naps just make her groggy. She writes to a doctor for advice about how to get more energy. The doctor tells her that a short nap might help, but she really needs to get more sleep at night. The table in Source #1 supports the doctor's advice. According to the table, a school-aged person should get 9–10 hours of sleep a day.

---

**Exemplar 1 point**

The table in Source #1 shows how much sleep people of different ages need every day. In Source #3, a 12-year-old girl writes that she only gets 8 hours of sleep a day and is tired. She wants to know what to do to get more energy. The doctor replies that she should get more sleep at night. The table in Source #1 supports the doctor’s advice because, according to the table, a school age person should have 9-10 hours sleep.

---

**Exemplar 0 points**

The table in Source #1 shows that people need to sleep, or they will get tired.
People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. Provide two pieces of evidence from different sources that support this claim and explain how each example supports the claim. Cite evidence for each piece of information and identify the source by title or number.

Rubric

**Score: 2**
Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim and that explains how each example supports the claim. Student cites the source for each example.

**Score: 1**
Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim but doesn’t explain how each example supports the claim. Student cites the sources.

OR
Response is an evidence-based explanation that provides two pieces of evidence from a single source that supports this claim and that explains how that example supports the claim. Student cites the source.

OR
Response is an evidence-based explanation that provides only one piece of evidence from a single source that support this claim and that explains how that example supports the claim. Student cites the source.

OR
Response is an evidence-based explanation that provides two pieces of evidence from different sources that support this claim and that explains how each example supports the claim. Student does not cite sources.

**Score: 0**
Response is an explanation that is incorrect, irrelevant, insufficient, or blank.
People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. According to Source #1, everyone needs a certain amount of sleep and that you need to sleep when your body is ready to sleep. If you don’t get your required amount of sleep each night, you will experience “sleep debt” which can’t be made up. Source #2 describes problems people might have when they don’t get regular amounts of sleep. They discovered that astronauts in space who lost sleep got more grumpy and concentrated less. Doctors in training and people who work in emergency rooms often don’t get regular sleep. They found that when they took naps to help catch up on sleep, they made fewer mistakes. So, it is important to get regular sleep, but if your sleep is interrupted, you might need to take a nap to help your body catch up.

Exemplar 2 points

People whose sleep is routinely interrupted might need to pay special attention to their sleep needs. According to Source #1, everyone needs a certain amount of sleep and that you need to sleep when your body is ready to sleep. If you don’t get your required amount of sleep each night, you will experience “sleep debt” which can’t be made up. Source #2 describes problems people might have when they don’t get regular amounts of sleep. They discovered that astronauts in space who lost sleep got more grumpy and concentrated less. Doctors in training and people who work in emergency rooms often don’t get regular sleep. They found that when they took naps to help catch up on sleep, they made fewer mistakes. So, it is important to get regular sleep, but if your sleep is interrupted, you might need to take a nap to help your body catch up.

Exemplar 1 point

People whose sleep is interrupted on a regular basis might become more grumpy, be unable to concentrate, and make more mistakes because they are tired. A nap might help.

Exemplar 0 points

Everyone needs to sleep on a regular basis.
<table>
<thead>
<tr>
<th>Item</th>
<th>DOK</th>
<th>Standard(s)</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Task Item 3</td>
<td>3</td>
<td>7.W.5</td>
<td>Row 1: Source #3: Ask the Sleep Doctor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Row 3: Source #2: The Secret Truth about Napping</td>
</tr>
</tbody>
</table>

Click on the boxes to show the claim(s) that each source supports. Some sources will have more than one box selected.

<table>
<thead>
<tr>
<th>Source #1: How Much Sleep Is Enough?</th>
<th>Source #2: The Secret Truth about Napping</th>
<th>Source #3: Ask the Sleep Doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you take too long of a nap, you might feel sleepy.</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>If your sleep patterns interrupt your body's internal clock, you might have trouble getting enough sleep.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>A deep sleep helps the brain to operate at a higher level.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Now begin work on your explanatory article. Manage your time carefully so that you can

- plan your multi-paragraph explanatory article.
- write your multi-paragraph explanatory article.
- revise and edit the final draft of your multi-paragraph explanatory article.

Word-processing tools and spell check are available to you.

For Part 2, you are being asked to write a multi-paragraph explanatory article, so please be as thorough as possible. Type your response in the space provided. The box will expand as you type.

Remember to check your notes and your prewriting/planning as you write and then revise and edit your explanatory article.
## 4-Point Explanatory Performance Task Writing Rubric (Grades 6–11) Organization/Purpose

<table>
<thead>
<tr>
<th>Score 4</th>
<th>Score 3</th>
<th>Score 2</th>
<th>Score 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>The response has a clear and effective organizational structure, creating a sense of unity and completeness. The organization is fully sustained between and within paragraphs. The response is consistently and purposefully focused: • thesis/controlling idea of a topic is clearly communicated, and the focus is strongly maintained for the purpose and audience • consistent use of a variety of transitional strategies to clarify the relationships between and among ideas • effective introduction and conclusion • logical progression of ideas from beginning to end; strong connections between and among ideas with some syntactic variety</td>
<td>The response has an evident organizational structure and a sense of completeness. Though there may be minor flaws, they do not interfere with the overall coherence. The organization is adequately sustained between and within paragraphs. The response is generally focused: • thesis/controlling idea of a topic is clear, and the focus is mostly maintained for the purpose and audience • adequate use of transitional strategies with some variety to clarify the relationships between and among ideas • adequate introduction and conclusion • adequate progression of ideas from beginning to end; adequate connections between and among ideas</td>
<td>The response has an inconsistent organizational structure. Some flaws are evident, and some ideas may be loosely connected. The organization is somewhat sustained between and within paragraphs. The response may have a minor drift in focus: • thesis/controlling idea of a topic may be somewhat unclear, or the focus may be insufficiently sustained for the purpose and/or audience • inconsistent use of transitional strategies and/or little variety • introduction or conclusion, if present, may be weak • uneven progression of ideas from beginning to end; and/or formulaic; inconsistent or unclear connections between and among ideas</td>
<td>The response has little or no discernible organizational structure. The response may be related to the topic but may provide little or no focus: • thesis/controlling idea may be confusing or ambiguous; response may be too brief or the focus may drift from the purpose and/or audience • few or no transitional strategies are evident • introduction and/or conclusion may be missing • frequent extraneous ideas may be evident; ideas may be randomly ordered or have an unclear progression</td>
</tr>
</tbody>
</table>

No Score: Insufficient (includes copied text); in a language other than English; off-topic; or off-purpose.
### 4-Point Explanatory Performance Task Writing Rubric (Grades 6–11) Evidence/Elaboration

<table>
<thead>
<tr>
<th>Score 4</th>
<th>Score 3</th>
<th>Score 2</th>
<th>Score 1</th>
</tr>
</thead>
</table>
| The response provides thorough elaboration of the support/evidence for the thesis/controlling idea that includes the effective use of source material. The response clearly and effectively develops ideas, using precise language:  
• comprehensive evidence (facts and details) from the source material is integrated, relevant, and specific  
• clear citations or attribution to source material  
• effective use of a variety of elaborative techniques  
• vocabulary is clearly appropriate for the audience and purpose  
• effective, appropriate style enhances content | The response provides adequate elaboration of the support/evidence for the thesis/controlling idea that includes the use of source material. The response adequately develops ideas, employing a mix of precise and more general language:  
• adequate evidence (facts and details) from the source material is integrated and relevant, yet may be general  
• adequate use of citations or attribution to source material  
• adequate use of some elaborative techniques  
• vocabulary is generally appropriate for the audience and purpose  
• generally appropriate style is evident | The response provides uneven, cursory laboration of the support/evidence for the thesis/controlling idea that includes uneven or limited use of source material. The response develops ideas unevenly, using simplistic language:  
• some evidence (facts and details) from the source material may be weakly integrated, imprecise, repetitive, vague, and/or copied  
• weak use of citations or attribution to source material  
• weak or uneven use of elaborative techniques; development may consist primarily of source summary  
• vocabulary use is uneven or somewhat ineffective for the audience and purpose  
• inconsistent or weak attempt to create appropriate style | The response provides minimal elaboration of the support/evidence for the thesis/controlling idea that includes little or no use of source material. The response is vague, lacks clarity, or is confusing:  
• evidence (facts and details) from he source material is minimal, irrelevant, absent, incorrectly used, or predominantly copied  
• insufficient use of citations or attribution to source material  
• minimal, if any, use of elaborative techniques  
• vocabulary is limited or ineffective for the audience and purpose  
• little or no evidence of appropriate style |

**No Score:** Insufficient (includes copied text); in a language other than English; off-topic; or off-purpose.

### 2-Point Explanatory Performance Task Writing Rubric (Grades 6–11) Conventions

<table>
<thead>
<tr>
<th>Score 2</th>
<th>Score 1</th>
<th>Score 0</th>
</tr>
</thead>
</table>
| The response demonstrates an adequate command of conventions:  
• adequate use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling | The response demonstrates a partial command of conventions:  
• limited use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling | The response demonstrates little or no command of conventions:  
• infrequent use of correct sentence formation, punctuation, capitalization, grammar usage, and spelling |

**No Score:** Insufficient (includes copied text); in a language other than English; off-topic; or off-purpose.

### Holistic Scoring:

- **Variety:** A range of errors includes sentence formation, punctuation, capitalization, grammar usage, and spelling
- **Severity:** Basic errors are more heavily weighted than higher-level errors.
- **Density:** The proportion of errors to the amount of writing done well. This includes the ratio of errors to the length of the piece

The points for Organization/Purpose and Evidence/Elaboration rubrics are averaged together for one 4-point score. This is combined with the Conventions score for a 6-point total score.
Which expression is equivalent to \(-\frac{3}{4} \cdot \frac{7}{2} \div \frac{3}{8}\)?

A. \(-\frac{1}{2} \cdot \frac{7}{2}\)
B. \(\frac{1}{2} \cdot \frac{7}{2}\)
C. \(\frac{2}{1} \cdot \frac{7}{2}\)
D. \(\frac{2}{1} \cdot \frac{7}{2}\)

2019–2020 Released Items Repository Scoring Guide
A bread company makes wheat dough and rye dough each day. The company makes 15.2 pounds of wheat dough for every 9.5 pounds of rye dough.

How many pounds of wheat dough does the company make for each pound of rye dough?

1.6

<table>
<thead>
<tr>
<th>Item</th>
<th>DOK</th>
<th>Calculator</th>
<th>Standard(s)</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>Allowed</td>
<td>7.AF.7</td>
<td>1.6 or any equivalent value</td>
</tr>
</tbody>
</table>
Roderick can water his lawn with a small hose or a large hose.

- The small hose pumps 15 gallons of water per minute.
- The large hose pumps water at twice the rate of the small hose.

Use the Add Arrow tool to show the relationship between time and the gallons of water pumped by the large hose.

<table>
<thead>
<tr>
<th>Item</th>
<th>DOK</th>
<th>Calculator</th>
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<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>Allowed</td>
<td>7.AF.9</td>
<td>A graph of the line ( y = 30x )</td>
</tr>
</tbody>
</table>
Cary’s barbecue sauce recipe calls for \(2 \frac{2}{3}\) cups of water for every 8 pints of tomato sauce.

How many cups of water does Cary use when she makes barbecue sauce with 1 pint of tomato sauce?

\[
\frac{1}{3}
\]
Tim is clearing brush from a large piece of land. The table shows how many acres he has cleared over time.

**Brush Clearing**

<table>
<thead>
<tr>
<th>Acres Cleared</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{2}{3} )</td>
<td>2</td>
</tr>
<tr>
<td>( 1 \frac{2}{3} )</td>
<td>5</td>
</tr>
<tr>
<td>( 2 \frac{1}{3} )</td>
<td>7</td>
</tr>
</tbody>
</table>

How many days does it take Tim to clear 1 acre?

\[ \boxed{3} \]
On Monday, the theater club sells 14 tickets for the school play. On Tuesday, they sell 10 tickets. On those two days, they sell 32% of the total number of tickets.

What is the total number of tickets?

75
Charmaine observes the number of times the 5:00 p.m. train is early, late, and on time. She records her observations of the train for 80 days in a row in the table shown.

<table>
<thead>
<tr>
<th>Early</th>
<th>23 times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late</td>
<td>9 times</td>
</tr>
<tr>
<td>On Time</td>
<td>48 times</td>
</tr>
</tbody>
</table>

Based on Charmaine’s data, how many trains are likely to be late over the next 400 days?

45
A fair cube has 2 blue sides, 2 red sides, and 2 green sides.

What is the probability of rolling a blue or red side?

\[
\frac{4}{6}
\]
Use the Connect Line tool to draw an acute scalene triangle with a side length measuring 4 units.

<table>
<thead>
<tr>
<th>Item</th>
<th>DOK</th>
<th>Calculator</th>
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<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>Allowed</td>
<td>7.GM.1</td>
<td>Any triangle in which all three sides are unique, all angles are acute, and one side measures 4 units</td>
</tr>
</tbody>
</table>
Angelo drew the two rectangles shown. The second is a scale drawing of the first.

First Rectangle
- 4.5 in.
- 6.5 in.

Second Rectangle
- 11.25 in.
- 16.25 in.

What scale factor did Angelo use to draw the second rectangle?

<table>
<thead>
<tr>
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<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>2</td>
<td>Allowed</td>
<td>7.GM.3</td>
<td>2.5 or any equivalent value</td>
</tr>
</tbody>
</table>
Indiana Department of Education
ILEARN Mathematics Item Key
Performance Task – Grade 7

<table>
<thead>
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<th>Item</th>
<th>DOK</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Performance Task Item 1</td>
<td>2</td>
<td>PS.1</td>
<td>See Rubric</td>
</tr>
</tbody>
</table>

**Rubric**

**Score: 2**
Student correctly calculates the height of one cup and provides a mathematically logical explanation as to how he/she calculated the height.

**Score: 1**
Student correctly calculates the height of one cup and provides an explanation that is not mathematically logical.
OR
Student only calculates the height of a single cup.

**Score: 0**
All other responses.

**Exemplar 2 points**

1 cup is 14 cm because if two cups is 16 and 4 cups is 20 then as cups stack 2 cm is added from each cup. To get to 20 from 16 its 4 cm. If only 2 cups are stacked, 16 – 2 = 14.

**Scoring Rationale: 2 points**
The student states the correct height for one cup and explains his/her method for determining the height.
Exemplar 1 point

14 cm. It looks like the top ridge is 2 cm. So I subtracted 2 cm from 16 cm and 14 cm.

Scoring Rationale: 1 point
The student states the correct height for the cup, but does not provide a mathematically logical solution, and instead states “It looks like the top ridge is 2 cm.”

Exemplar 0 points

8 cm. If two are 16, divide by two to get the size of one.

Scoring Rationale: 0 points
Student incorrectly states the height and provides a mathematically incorrect approach for solving the problem.
Your teacher thinks that instead of having to figure out these stacks each time, it would be useful to understand the general relationship.

Write an equation expressing the relationship between the height of the stack and the number of cups in the stack.

Let \( h \) represent the height of the stack, in cm, and \( n \) the number of cups in the stack.

Let \( h = 2n + 12 \), or equivalent.

**NOTE:** This sample item may go beyond the intent of the standard; it is included here to demonstrate the functionality/experience of a Performance Task.
Indiana Department of Education  
ILEARN Mathematics Item Key  
Performance Task – Grade 7

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Performance Task Item 3</td>
<td>2</td>
<td>PS.3</td>
<td>See Rubric</td>
</tr>
</tbody>
</table>

The catalog is advertising a stack of these cups that is 95 cm tall. Lori says, “That must be a misprint because a stack of that height is not possible.”

Do you agree or disagree with Lori? Explain your reasoning.

<table>
<thead>
<tr>
<th>Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Score: 2</strong></td>
</tr>
<tr>
<td>Student agrees with Lori and provides a valid mathematical explanation as to why a stack of cups could not reach 95 cm. For example, students could attend to the fact that all stacks are an even number of centimeters, or that when they plug in 95 for ( h ) to solve for ( n ), it yields a non-whole number.</td>
</tr>
<tr>
<td><strong>Score: 1</strong></td>
</tr>
<tr>
<td>Student agrees with Lori, but provides a mathematical explanation that is incomplete.</td>
</tr>
<tr>
<td><strong>Score: 0</strong></td>
</tr>
<tr>
<td>Student disagrees with Lori.</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>Student agrees with Lori, but does not offer any explanation for why.</td>
</tr>
</tbody>
</table>

# Words 0/4000, # Chars 0/20000
Rubric

Score: 2
Student describes the key dimensions of the cup (height of cup, height of lip) and explains how 10 cups will reach a height of exactly 125 cm.

Score: 1
Student describes the key dimensions of the cup (height of cup, height of lip) that would satisfy the constraints, but does not explain how 10 cups will reach a height of exactly 125 cm.

Score: 0
Student does not describe key dimensions that would satisfy the constraints.

Exemplar 2 points

10 cm lips with 25 cm base is 35 cm tall each

The base of the cup is 25 cm, then 10 x 10 cm for the lips will be 100 cm for all of the lips. 100 + 25 is 125 for the whole stack.

Scoring Rationale: 2 points
The student provides the key measurements of the cup (“lips” and “base”) and describes how these dimensions meet the required specifications.
Exemplar 1 point

To make the cups how Karmin wants them to be, you would make the cups 12.4 cm tall and it would make a stack of 10 at 125 cm tall.

Scoring Rationale: 1 point
The student partially explains the dimensions but fails to explain how they will meet the required specifications.

Exemplar 0 points

- must be at least 15 cm tall, individually
- must be styrofoam
- must be able to be divided by the height to get number

Scoring Rationale: 0 points
Student does not describe key dimensions for the height.