SHSAT practice worksheet

Math | Questions 1-6. Follow the directions for each question.

1. On Saturday, the ratio of adults to children who visited a library was 5 to 3. On Sunday, 12 fewer adults and 18 more children visited than on Saturday. The numbers of adults and children who visited on Sunday were equal. How many people visited the library on Saturday?

A. 48
B. 72
C. 120
D. 126

2. The table shows the numbers of books returned during shifts at a library. The mean number of books returned per shift was 9. How many shifts are represented in the table?

Books returned per shift	Number of shifts
6	4
8	7
10	n
12	3

A. 10
B. 13
C. 14
D. 24

3. A rectangular garden is 24 feet long and 18 feet wide. A walkway of uniform width runs along all four sides inside the garden's boundary. The walkway has an area of 152 square feet. What is the width of the walkway?

A. 1 foot
B. 2 feet
C. 3 feet
D. 4 feet

4. Eight cards are numbered 1 through 8, with one number on each card. Two cards are selected at random, one at a time, without replacement. What is the probability that the first card has an even number and the sum of the two numbers is greater than 10?

A. 5/28
B. 1/4
C. 5/14
D. 3/16

5. At 9:00 a.m., a tank contains 48 liters of water. A pipe begins adding water at a rate of 6 liters per minute. At 9:10 a.m., a drain opens and begins removing water at a rate of 2 liters per minute while the pipe continues to add water. How many minutes after 9:00 a.m. will the tank first contain 180 liters?

Enter a whole number: _____

6. A whole number has a remainder of 2 when divided by 5 and a remainder of 5 when divided by 8. What is the least such number greater than 50?

A. 57
B. 61
C. 72
D. 77

English language arts

Reading comprehension | Read the passage for questions 7-10.

The Second Label

1. By the time the museum opened on Saturdays, I had usually written a label for whatever was going into the front case. I liked snapping the little card into its brass holder. The object had stopped being a question that someone had left on our worktable.

2. That week we displayed a wooden shuttle, worn smooth except for a deep score down one side. I wrote that the notch had kept the thread from slipping. I'd spent half an hour with a weaving manual, and the diagram, although it showed a different kind of shuttle, seemed close enough. My aunt, who kept the museum, read my card and said only, "Put your sources in the folder."

3. Just before noon an older visitor bent so close to the glass that his glasses almost touched it. "My mother filed a groove like that into hers," he told me. "She could tell by touch which way to pick it up." By the time I found the folder, he was buttoning his coat. I asked how he knew our shuttle's notch had served the same purpose. He looked surprised. "I don't," he said. "I know what she used hers for."

4. I slid my card halfway out of its holder. From there I could still read the first sentence, which was suddenly the problem. It had exactly the brisk confidence I'd worked to give it. I went back to the folder and copied the page number beside the sketch, then made a note about the visitor. This time I wrote down what he'd actually said.

5. My aunt gave me a second brass holder. I kept the date and place from the old label. On the other card I put the two possible explanations and where each one had come from. Over the next week I saw visitors lean toward the first card and then step sideways to read the second. It was a little movement, but I had begun to look for it.

7. How does paragraph 2 mainly contribute to the development of the passage?

A. It sets up a disagreement between the narrator and the aunt over which details belong on a label.
B. It establishes that the narrator's first explanation rests on evidence from a similar object.
C. It shows that the museum relies on books whenever firsthand accounts are unavailable.
D. It suggests that the marks on the shuttle will be used to establish its age and origin.

8. Read this quotation from paragraph 3.

"I don't," he said. "I know what she used hers for."

How does the visitor's reply affect the narrator's understanding of the notch?

A. It leads the narrator to give a firsthand account more weight than the written source.
B. It leads the narrator to conclude that the groove served one function on the visitor's mother's shuttle and another on the museum's.
C. It makes the narrator question how accurately the visitor remembered his mother's shuttle.
D. It helps the narrator see the difference between evidence about this shuttle and evidence about a similar one.

English language arts

Questions 9 and 10 refer to “The Second Label” on page 2.

9. Which two sentences best show a change in what the narrator wants a museum label to do?

Select two answers.

A. “The object had stopped being a question that someone had left on our worktable.” (paragraph 1)
B. “I’d spent half an hour with a weaving manual, and the diagram, although it showed a different kind of shuttle, seemed close enough.” (paragraph 2)
C. “I kept the date and place from the old label.” (paragraph 5)
D. “On the other card I put the two possible explanations and where each one had come from.” (paragraph 5)

10. What is the main effect of the description of the visitors’ movement in paragraph 5?

A. It shows the narrator taking satisfaction in seeing visitors move from established information to unresolved possibilities.
B. It suggests that visitors prefer hearing about people who used the shuttle to learning when and where it was made.
C. It indicates that the narrator is beginning to notice how the museum’s layout determines which artifacts draw attention.
D. It implies that the narrator expects visitors to decide which of the two explanations belongs on the main label.

Revising and editing | Read the student's draft

(1) In April, the school garden club offered free seedlings to neighbors. (2) The club placed trays of seedlings under three signs. (3) Each sign showed how many hours of sunlight the plants in that group needed. (4) A volunteer walked visitors through the display. (5) Many visitors had balconies that received direct sunlight for only part of the day. (6) The visitors and the volunteer used the signs to choose plants suited to those balconies. (7) Next year, the club plans to print care instructions in several languages.

11. Which revision best combines sentences 2 and 3?

A. The club placed three signs over each tray to show how many hours of sunlight the plants in that tray needed.
B. The club arranged its trays under three signs, which showed how many hours of sunlight the display received.
C. The club placed trays of seedlings under three signs, each of which showed how many hours of sunlight the plants grouped beneath it needed.
D. The club put signs on three trays, each of which held seedlings that needed the same number of hours of sunlight.

12. Which sentence should follow sentence 6 to create the best transition to sentence 7?

A. The signs also helped the volunteer explain why some balconies received less sunlight than others.
B. Once visitors had chosen their seedlings, several asked how to care for them at home.
C. The club learned which seedlings visitors took first and planned to grow more of those the following spring.
D. Some visitors brought their own containers to protect the seedlings while carrying them home.

Answer key and explanations

Review every missed answer and every guess.

Math

1. C | Ratio and changing quantities

Saturday had 30 more adults than children: the difference fell by 12 when fewer adults visited and by 18 when more children visited. The 5-to-3 ratio makes that difference 2 equal parts, or 15 people per part. Saturday's 5 + 3 parts represent 120 visitors.

2. D | Mean from a frequency table

The 14 known shifts account for 4 × 6 + 7 × 8 + 3 × 12 = 116 books. To average 9, those shifts would need 126 books, so they are 10 below that total. Each 10-book shift adds one above the mean. There were 10 such shifts and 14 + 10 = 24 shifts altogether.

3. B | Area of a rectangular border

The area inside the walkway is 24 × 18 - 152 = 280 square feet. A 2-foot walkway reduces each dimension by 4 feet, leaving a 20-foot by 14-foot rectangle. Its area is 280. Subtract the walkway's width from both ends of each dimension.

4. A | Probability of ordered outcomes

There are 8 × 7 = 56 ordered outcomes. If the first card is 2, 4, 6, or 8, the respective numbers of qualifying second cards are 0, 2, 3, and 5. The probability is 10/56 = 5/28. Counting only outcomes that start with an even card would answer a conditional probability question.

5. 28 | Rates that change over time

At 9:10 a.m. the tank contains 48 + 10 × 6 = 108 liters. After the drain opens, the amount increases by 6 - 2 = 4 liters each minute. The remaining 72 liters take 18 minutes, for a total of 28 minutes after 9:00 a.m.

6. D | Remainder patterns

The numbers greater than 50 that leave 5 when divided by 8 begin 53, 61, 69, and 77. Of these, 77 is the first to end in 2 or 7, so it also leaves 2 when divided by 5.

English language arts

7. B | Function of a paragraph

The manual shows a different kind of shuttle, yet the narrator writes that this notch kept thread from slipping. That gap between evidence and claim sets up the visitor's distinction in paragraph 3. The aunt asks for a source and leaves the original claim alone.

8. D | Interpreting dialogue

The visitor limits his claim to his mother's shuttle. That distinction also applies to the manual's drawing, which shows another kind of shuttle. The narrator keeps both sources and changes how their evidence is presented.

9. A and D | Selecting textual evidence

The first sentence shows that a label originally felt like the end of a question. The last choice shows the narrator using a label to keep the question open and identify evidence. Keeping the date and place shows continuity, and the manual sentence describes the search for a source.

10. A | Effect of the ending

The first card presents the date and place. The second presents two possible uses. Watching visitors move between them has become satisfying to the narrator. The movement gives no evidence that visitors favor one source or are expected to settle the question.

11. C | Combining sentences without changing meaning

The draft says the three signs identify each group's sunlight needs. Choice C links each sign to its plants and keeps the trays below the signs. A puts three signs over each tray. B describes the light at the display. D moves the signs onto the trays and omits what they showed.

12. B | Connecting ideas across sentences

The questions about care follow the selection of the seedlings and give a reason for the club to provide written instructions next year. Bringing containers is also a step after choosing a plant, but it does not explain the decision to print care instructions.