SESSION 1

This session contains 33 multiple-choice questions. Fill in the circle of your answer to each multiple-choice question.

You may use a protractor and a ruler during this session. You may use a calculator during this session.

SAMPLE

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Directions: Read each problem. Then fill in the circle of the best answer.

1 Ariana picks a card from a deck of 10 colored cards. The probability that she picks a card that is yellow is likely. Which of the following numbers could represent the probability that Ariana picks a yellow card?

Ⓐ 0.5

Ⓑ 0.8

Ⓒ 1

Ⓓ 10

2 Willem wants to know how many of the residents in his town are in favor of having a new shopping plaza built. He plans to ask a group of 100 people for their opinion. Which group of people would most likely give Willem the most accurate results?

Ⓐ residents at a town meeting

Ⓑ neighbors living close to Willem

Ⓒ shoppers at the existing shopping plaza

Ⓓ people found in a local phone directory

3 A circular parachute used in a school gym has a radius of 6 feet. What is the circumference, in feet, of the parachute?

Ⓐ 6π feet

Ⓑ 9π feet

Ⓒ 12π feet

Ⓓ 36π feet

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SESSION 2

This session contains seven multiple-choice questions, seven short constructed-response items, and one extended constructed-response item. Fill in the circle of your answer to each multiple-choice question. Write your answers for the constructed-response items in the spaces provided.

You may use a protractor and a ruler during this session. You may use a calculator during this session.

SAMPLE

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Directions: Read each problem. Then fill in the circle of the best answer.

34 Jason and Keith play an online game where they build imaginary towns. Houses are worth 3 points and hotels are worth 5 points. One day, Jason builds 10 houses and some hotels worth a total of 70 points. Keith builds some houses and $\frac{1}{2}$ as many hotels as Jason, for a total of 65 points. How many houses did Keith build?

Ⓐ 5

Ⓑ 10

Ⓒ 13

Ⓓ 15

35 A stereo is marked down by a certain percentage for a sale one week. The following week, the sale price of the stereo is marked up by the same percentage the original price was marked down. Which statement is true of the price of the stereo the week following the sale?

Ⓐ It is lower than the original price.

Ⓑ It is the same as the original price.

Ⓒ It is higher than the original price.

Ⓓ Its relation to the original price depends on the percentage.

36 Each student in a class must buy a pair of shorts and a T-shirt to use as a gym uniform. There are 23 students in the class. The gym T-shirts cost $7.50. If the total amount the class spent on gym uniforms was $425.50, how much does each pair of shorts cost?

Ⓐ $7.50

Ⓑ $8.50

Ⓒ $10.00

Ⓓ $11.00

SAMPLE

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48 A photographer plans to shoot four photo sessions today. She will need to store all the photos on her camera's memory card. The table below shows the number of photos planned for each session.

Session	Number of Photographs
A	85
B	235
C	145
D	150

Each photograph takes up about 2.9 megabytes of space on the memory card. The memory card is 2 gigabytes, and a gigabyte is 1,000 megabytes.

Part A: Does the photographer have enough space on her memory card for the number of photographs she plans to take? Explain how you know you are correct.

_____

_____

Part B: During session A, the photographer takes 80% more photos than she had planned to take. How many megabytes remain open on the memory card after session A?

Show your work.

Answer: _____ megabytes

SAMPLE

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The photographer takes the planned number of photos in sessions B and C. At session D, the customer requests that she take the pictures with a higher resolution. These photos will take up 3.4 megabytes of space on the card.

Part C: Does the photographer have enough space left on her memory card to take all the planned photos for session D at a higher resolution? Explain how you know you are correct.

SAMPLE

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