8 Nathan has four pennies in a bag. The pennies are dated 1982, 1996, 2001, and 2008. He plans to randomly select a penny and replace it in the bag 100 times.

Part A

Circle an option from each set to correctly complete the statement.

Nathan expects that the | approximate | | exact | number of times

he will select the 1996 penny is | 2 | | 25 | | 50 | | 100 | times.

Part B

Circle an option from each set to correctly complete the statement.

If Nathan repeats this random selection 100 more times, the | approximate |

| exact | probability that he will choose a penny dated before 2000

is | 0.25 | | 0.4 | | 0.5 | | 0.75 |.

9 Desmond rolls a 1–6 number cube and flips a fair coin. The coin lands either heads side up (H) or tails side up (T).

Which of the following lists shows the sample space of possible outcomes?

○ **A** 1, 2, 3, 4, 5, 6, H, T

○ **B** 1HT, 2HT, 3HT, 4HT, 5HT, 6HT

○ **C** 1H, 1T, 2H, 2T, 3H, 3T, 4H, 4T, 5H, 5T, 6H, 6T

○ **D** 1HT, 1TH, 2HT, 2TH, 3HT, 3TH, 4HT, 4TH, 5HT, 5TH, 6HT, 6TH

GO ON →

29 A photographer plans to shoot four photo sessions today. He will need to store all the photos on his 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

The photographer estimates that he has enough space on his memory card for the photographs that he plans to take.

Circle an option in each set to correctly complete the statement.

The photographer's estimate | is | | is not | correct because these

photographs will take up approximately | 1,200 | | 1,800 | | 1,900 |

| 2,000 | | 2,400 | megabytes.

Part B

During session A, the photographer takes 80% more photos than he had planned to take.

How many megabytes remain open on the memory card after session A? Write your answer in the box.

[ ] megabytes

GO ON →

Part C

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

Circle an option in each set to correctly complete the statement.

The photographer ⬚ does ⬚ ⬚ does not ⬚ have enough space left on

his memory card to take all the planned photos for session D at the higher

resolution. There are ⬚ 187.8 ⬚ ⬚ 454.3 ⬚ ⬚ 651.5 ⬚ ⬚ 898 ⬚ megabytes

open on the memory card, which is ⬚ more than ⬚ ⬚ less than ⬚ what he

needs.

Part D

The customer for session B paid a $65 sitting fee to the photographer and ordered the following:

- a CD of all photographs for $35.99
- 2 11"-by-17" canvas prints for $125.99 each
- 2 8"-by-12" framed prints for $45.99 each

The photographer gave the customer a 10% discount on the products he ordered.

How much did the customer pay the photographer in all? Write your answer in the box.

$ ⬚