

# SESSION 1

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

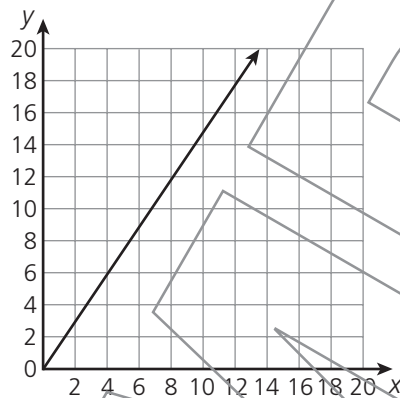
You may use a protractor and a ruler during this session. You may use a calculator during this session.

SAMPLE

**20** 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

**21** The graph below shows the proportional relationship between  $x$ , the number of eggs used in an egg casserole, and  $y$ , the number of servings in the casserole.



Which equation describes the proportional relationship shown above?

- (A)  $y = \frac{3}{2}x$
- (B)  $y = \frac{2}{3}x$
- (C)  $y = \frac{3}{2}x + 1$
- (D)  $y = \frac{2}{3}x + 1$

## 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 answer for the constructed-response items in the space provided.

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

SAMPLE

**36** T-shirts at a gift shop cost \$12.50 each. Mr. Eckert buys 4 medium T-shirts and some small T-shirts for his grandchildren. If he spends a total of \$87.50, how many small T-shirts did Mr. Eckert buy?

- (A) 3
- (B) 4
- (C) 7
- (D) 11

**37** Drake collected data on the number of customers who ordered the chef's specials at two different restaurants last week. The data is shown in this table.

**CHEF'S SPECIALS ORDERED**

Restaurant	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
X	10	32	20	13	30	35	35
Y	28	30	25	30	45	50	44

Drake predicts which restaurant will have more customers who order the chef's specials next week. Which statement is most reasonable based on the data?

- (A) More will order from Y than from X since the mean for Y is greater.
- (B) More will order from Y than from X since the median for Y is greater.
- (C) The same number will order from X and from Y since the ranges are the same.
- (D) The same number will order from X and from Y since the medians are the same.

47

Mrs. Chang spent \$44 for a movie ticket and a snack for each of her 4 children. Each snack cost \$3.50. Each movie ticket cost the same amount.

One of Mrs. Chang's children wrote this incorrect equation to find  $x$ , the cost in dollars, of each movie ticket.

$$4x + 3.50 = 44$$

**Part A:** Explain why this equation is incorrect.

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**Part B:** Write and solve a correct equation to find the cost of each movie ticket.

**Show your work.**

**Answer:** \$ \_\_\_\_\_



48

A new book comes out in paperback. The paperback version sells for 40% less than the hardcover version.

**Part A:** If the price of the hardcover version is \$24.99, what is the cost of the paperback version?

**Show your work.**

**Answer:** \$ \_\_\_\_\_

In a shipment of paperback books, several are damaged. The bookstore can choose to return the books and receive  $\frac{1}{3}$  of the selling price as credit. The bookstore can also try to sell the books for  $\frac{1}{2}$  of the selling price.

**Part B:** If 22 books were damaged, how much more money would the store take in by selling all of the damaged books instead of returning them?

**Answer:** \$ \_\_\_\_\_

One day, the store sells 3 hardcover copies, 8 paperbacks, and 3 of the damaged books. The next day, the store sells 4 hardcover copies, 5 paperbacks, and 8 damaged books.

**Part C:** A store employee estimates that the store brought in about \$20 more with this book on the second day. Explain whether or not the employee is correct.

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