

Session 2A — Mathematics
(Calculator Not Allowed) Practice Test

MATHEMATICS (CALCULATOR NOT ALLOWED) — SESSION 2A

This practice session has three multiple-choice questions and one constructed-response question.

Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 1 through 3 in the spaces provided on page 2 of your practice test answer booklet. Multiple-choice questions are worth 1 point each.

Use the menu below to answer question 1.

BAGEL MENU	
Bagel Types	Cream Cheese Fillings
onion	plain
plain	bacon/scallion
sesame	tomato/basil
garlic	fat-free
rye	

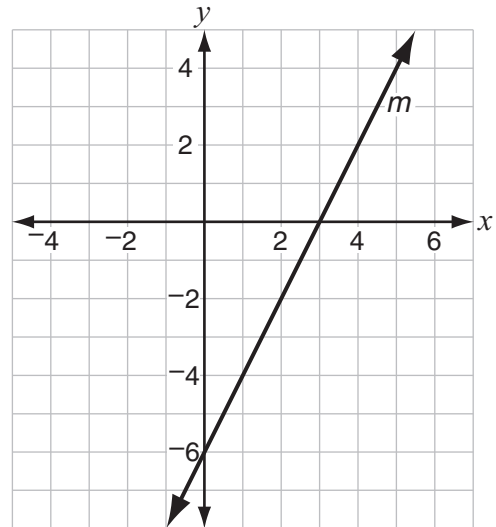
- 1 A bagel sandwich consists of one bagel type and one cream cheese filling. How many different bagel sandwiches can be made using the choices on this menu?
- A. 5 sandwiches
 - B. 9 sandwiches
 - C. 20 sandwiches
 - D. 25 sandwiches

- 2 Evaluate:

$$4(12 - 3 \times 2 + 8 \div 2)$$

- A. 40
- B. 46
- C. 52
- D. 88

- 3 Study the graph below.



What is the equation of line m on the graph?

- A. $y = 3x - 6$
- B. $y = 2x - 6$
- C. $y = 6x + 2$
- D. $y = 2x + 3$

PLEASE GO ON →

Write your answer to constructed-response question 4 in the box provided on page 2 of your practice test answer booklet. Be sure to answer and label all parts (a, b, c, etc.) of the question. Constructed-response questions are worth up to 4 points each.

- 4 Ms. Snider bought some ribbon for her craft club project. The ribbon came in packages that contained $2\frac{3}{8}$ yards of ribbon each.
- Ms. Snider bought 2 packages of gold ribbon. What was the total number of yards of gold ribbon that she bought? Show or explain how you got your answer.
 - Ms. Snider needed 16 yards of silver ribbon for the project. What is the fewest number of packages of ribbon that she can buy and have enough ribbon for the project? Show or explain how you got your answer.
 - Ms. Snider used 16 yards of the silver ribbon. What was the total number of yards that she had left over? Show or explain how you got your answer.



**Session 2B — Mathematics
(Calculator Allowed) Practice Test**

MATHEMATICS (CALCULATOR ALLOWED) — SESSION 2B

This practice session has thirteen multiple-choice questions, two short-answer questions, and one constructed-response question.

Choose the best answer for each multiple-choice question. Fill in the bubble next to your answer choices for questions 5 through 17 in the spaces provided on page 3 of your practice test answer booklet. Multiple-choice questions are worth 1 point each.

- 5 Students at a local college were asked how many hours they slept last night. The chart below shows these data.

Hours of Sleep	Number of Students
6	14
7	26
8	28
9	15
More than 10	6

A bar graph of these data will be made on a grid that is 20 units by 20 units. What scale would be **most** appropriate for the axis labeled “Number of Students”?

- A. 1 unit = 1 student
 - B. 1 unit = 2 students
 - C. 1 unit = 10 students
 - D. 1 unit = 28 students
- 6 Look at the expression below.

$$40p + 1.5ph$$

What is the value of the expression when $p = 8$ and $h = 15$?

- A. 342.5
- B. 441.5
- C. 500
- D. 612

- 7 The chart below shows how much the Party Haven charges for pizza parties for different numbers of people.

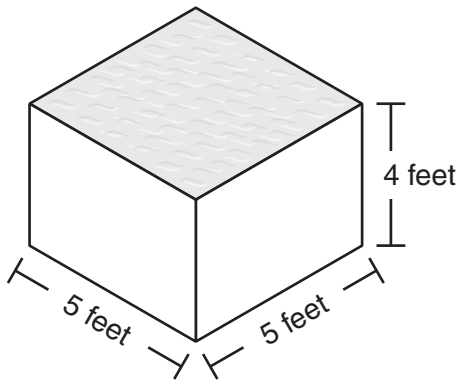
Number of People	Cost
5	\$ 45
8	\$ 60
12	\$ 80
20	\$120

If n stands for the number of people and C stands for the cost in dollars, which equation represents the information in the chart?

- A. $C = 5n + 20$
 - B. $C = n + 45$
 - C. $C = 5n + 40$
 - D. $C = 2n + 35$
- 8 A 2-inch-long grasshopper can jump 160 inches. If a 6-foot-tall man had the same height-to-jump-length ratio, how far could he jump?
- A. 480 feet
 - B. 320 feet
 - C. 27 feet
 - D. 13 feet

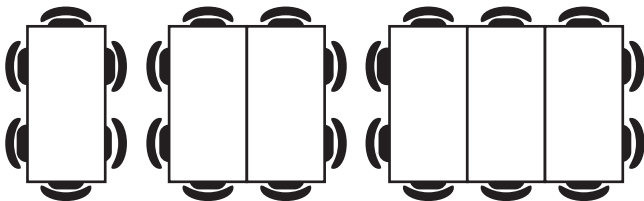
PLEASE GO ON ➔

- 9 The measurements of a container are shown below.



How many **gallons** of water does the container hold? (Hint: 1 cubic foot = 7.48 gallons)

- A. 100 gallons
 - B. 105 gallons
 - C. 748 gallons
 - D. 972.4 gallons
- 10 Tables in a restaurant can be combined to seat people as shown in the arrangements below.

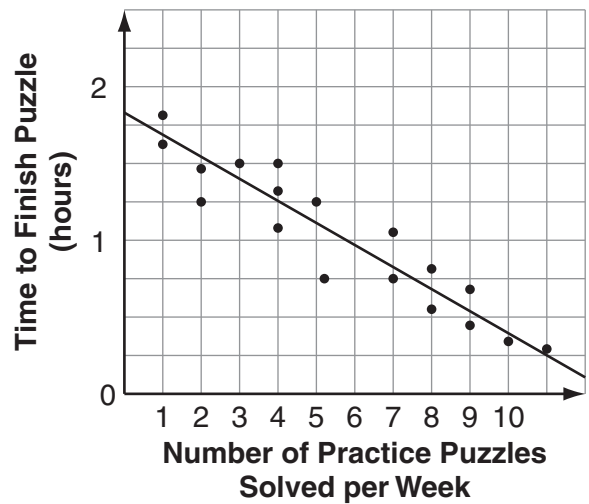


1 table seats 6 2 tables seat 8 3 tables seat 10

Which equation can be used to find the number of people, p , that can sit together when n tables are used?

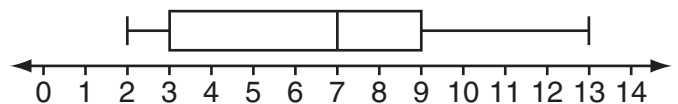
- A. $p = n + 2$
- B. $p = 2n + 4$
- C. $p = 2n + 6$
- D. $p = 6n + 2$

- 11 Ginny belongs to a club where members try to solve puzzles in the fastest time possible. She did a survey to see how much the club members practiced each week. After a recent puzzle-solving contest, she constructed the scatter plot below. The line of best fit is drawn.



Based on the plot, approximately how many practice puzzles per week do members solve if they finish the contest puzzle in one hour?

- A. 2
 - B. 4
 - C. 6
 - D. 10
- 12 The diagram below shows the number of points scored by players in a game.

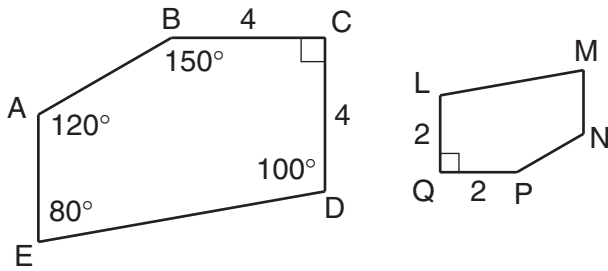


What is the range of the data in the diagram?

- A. 6
- B. 7
- C. 11
- D. 15

PLEASE GO ON ➔

- 13 Pentagon ABCDE is similar to pentagon NPQLM, as shown below.



What is the measure of angle N?

- A. 60°
 B. 75°
 C. 100°
 D. 120°
- 14 At the Spring Field Day students are given one chance to spin a spinner and win a prize. The spinner has four equal sections. One of the sections has a color on it, and the other three sections have a number on them. To win, the spinner must stop on a section with a number. If 20 students play the game, how many should be expected to win?
- A. 3
 B. 10
 C. 15
 D. 18
- 15 Jake packed 12 jars of paint in a box. Each jar and its contents weigh 10 ounces. The empty box weighs 1 pound 14 ounces. What is the total weight of the packed box?
- A. 7 pounds 8 ounces
 B. 9 pounds 2 ounces
 C. 9 pounds 6 ounces
 D. 10 pounds 2 ounces

- 16 The graph below shows the lunch waste produced by eighth-grade students at a middle school.



Which conclusion could be made from the information in the graph?

- A. About 20% of the lunch waste discarded is food.
 B. About $\frac{1}{3}$ of the lunch waste discarded is Styrofoam.
 C. More Styrofoam is discarded than paper and plastic combined.
 D. Less plastic is discarded than food.

PLEASE GO ON →

Use the table below to answer question 17.

**Heights of Starting
Basketball Players**

Player Name	Height
Ames	6 feet 2 inches
Baker	7 feet 0 inches
Card	6 feet 7 inches
Davis	6 feet 2 inches
Evans	6 feet 6 inches

- 17 What is the **median** height of the players listed above?
- A. 6 feet 2 inches
 - B. 6 feet 5 inches
 - C. 6 feet 6 inches
 - D. 6 feet 7 inches

Write your answers to short-answer questions 18 and 19 in the boxes provided on page 3 of your practice test answer booklet. Short-answer questions are worth up to 2 points each.

- 18 Solve for x .

$$10x + 5 = 3x - 23$$

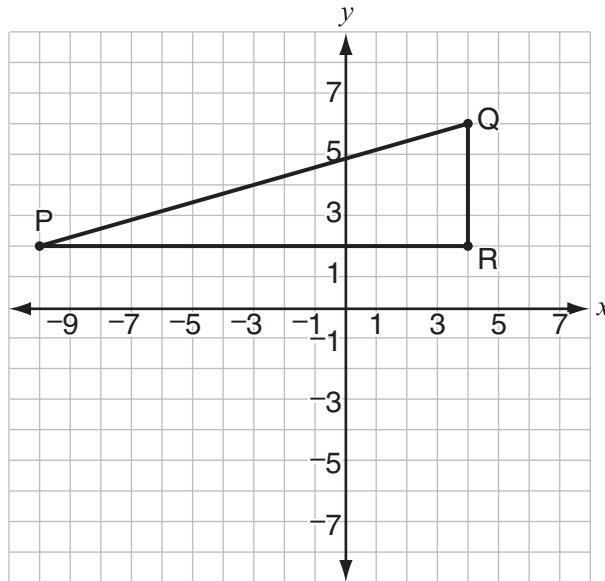
Show your work or explain how you found your answer.

- 19 Jack said, "When you multiply two numbers (factors), the product is greater than either of the factors."
- a. Write a multiplication sentence to show that Jack's statement is true for some factors.
 - b. Write a multiplication sentence to show that Jack's statement is false for some factors.

PLEASE GO ON ➔

Write your answer to constructed-response question 20 in the box provided on page 3 of your practice test answer booklet. Be sure to answer and label all parts (a, b, c, etc.) of the question. Constructed-response questions are worth up to 4 points each.

- 20 Triangle PQR is on the coordinate grid below.



- Using the grid above, locate the midpoint of segment QR and label it point M. Write the coordinates of point M in your answer booklet.
- Locate the midpoint of segment PR and label it point S. Write the coordinates of point S in your answer booklet.
- Locate the midpoint of segment PQ and label it point L. Write the coordinates of point L in your answer booklet.
- On the grid above, connect points L, M, and S to form triangle LMS. What is the area of triangle LMS? Show or explain how you found your answer.

