

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

# MATHEMATICS (CALCULATOR NOT ALLOWED) — SESSION 2A

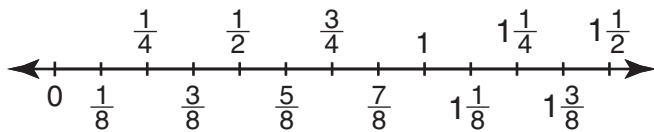
This practice session has six multiple-choice questions, one short-answer question, and one constructed-response question.

Choose the best answer for each multiple-choice question and mark your answer choices for questions 1 through 6 in the spaces provided on page 2 of your practice test answer booklet. Multiple-choice questions are worth 1 point each.

- 1 Hugh has 4 rows of blue tiles with 5 tiles in each row. He also has 5 white tiles. Which number sentence can be used to find the number of tiles Hugh has in all?

- A.  $4 + 5 + 5 = \square$
- B.  $(4 \times 5) + 5 = \square$
- C.  $(4 \times 5) \times 5 = \square$
- D.  $4 \times (5 + 5) = \square$

You may use the number line shown below to answer question 2.



- 2 Add:

$$\frac{3}{8} + \frac{3}{4}$$

- A.  $\frac{3}{12}$
- B.  $\frac{6}{12}$
- C.  $1\frac{1}{8}$
- D.  $1\frac{2}{4}$

- 3 The chart below lists the fruits and types of milk Natalie can use to make a fruit drink.

Fruit Drink

Fruit	Type of Milk
Peach	Low Fat Whole Soy
Banana	
Strawberry	
Raspberry	

She uses one fruit and one type of milk to make a fruit drink. How many different fruit drinks can Natalie make?

- A. 7
- B. 9
- C. 12
- D. 16

- 4 One cup of Nutty Flakes cereal contains 8% of the recommended daily allowance of calcium. What is 8% written as a decimal?

- A. 8.0
- B. 0.8
- C. 0.08
- D. 0.008

PLEASE GO ON →

- 5 The chairs in a theater are arranged in the pattern described below.
- The 1st row has 12 chairs.
  - Each of the following rows has 2 more chairs than the previous row.

How many chairs are in the **8th row** of the theater?

- A. 16
- B. 24
- C. 26
- D. 28

- 6 Jon is using a 1-cup measuring cup to fill a container with 2 quarts of water. How many cups of water are needed to fill the container?

- A. 4
- B. 8
- C. 12
- D. 16

Write your answer to short-answer question 7 in the box provided on page 2 of your practice test answer booklet. Be sure to answer and label all parts (a and b) of the question. Short-answer questions are worth up to 2 points each.

- 7 Solve each equation.

a.  $q \times 12 = 180$

b.  $r \div 19 = 21$

PLEASE GO ON ➡

Write your answer to constructed-response question 8 in the box provided on page 2 of your practice test answer booklet. Be sure to answer and label all parts (a, b, and c) of the question. Constructed-response questions are worth up to 4 points each.

- 8 Ashley, Jane, and Cecilia ordered lunch from the menu shown below.

<b>Lunch Menu</b>			
<b>Food</b>		<b>Beverages</b>	
<b>Small Pizza</b>	<b>\$8.00</b>	<b>Bottled Water</b>	<b>\$1.25</b>
<b>Large Pizza</b>	<b>\$12.50</b>	<b>Tea</b>	<b>\$0.80</b>
<b>Salad</b>	<b>\$2.25</b>	<b>Soda</b>	<b>\$1.75</b>
<b>Soup</b>	<b>\$3.25</b>	<b>Lemonade</b>	<b>\$2.00</b>

- Ashley and Jane each order one lemonade.
- Cecilia orders soup and one bottled water.
- Ashley, Jane, and Cecilia order one large pizza to share.

All prices on the menu include tax.

- a. What is the total amount of the lunch bill? Show or explain how you found your answer.
- b. The girls decide to leave a tip of  $\frac{1}{5}$  of the total lunch bill. What is the amount of the tip? Show or explain how you found your answer.
- c. Jane wants to pay  $\frac{2}{3}$  of the total bill including the tip. How much will she pay? Show or explain how you found your answer.



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

# MATHEMATICS (CALCULATOR ALLOWED) — SESSION 2B

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

Choose the best answer for each multiple-choice question and mark your answer choices for questions 9 through 18 in the spaces provided on page 3 of your practice test answer booklet. Multiple-choice questions are worth 1 point each.

- 9 Paul asked six store managers about the price of one dozen eggs at their stores. The table below shows the results of his survey.

**Egg Prices**

Store	Price (per dozen)
1	\$1.29
2	\$1.75
3	\$1.29
4	\$2.09
5	\$1.65
6	\$2.39

What is the **median** price of eggs at these stores?

- A. \$1.10
  - B. \$1.29
  - C. \$1.70
  - D. \$1.74
- 10 What three-dimensional figure has one base and triangular sides?
- A. prism
  - B. pyramid
  - C. cylinder
  - D. cone

- 11 The chart below shows the average annual rainfall in four of the world's driest places over a one year period.

**Rainfall in the World's Driest Places**

Place	Average Annual Rainfall (in inches)
Antofagasta, Chile	0.19
Aswan, Egypt	0.02
Ica, Peru	0.1
Luxor, Egypt	0.03

Which place has the **lowest** average annual rainfall?

- A. Antofagasta, Chile
  - B. Aswan, Egypt
  - C. Ica, Peru
  - D. Luxor, Egypt
- 12 Jeff likes to bowl. In his last five games, his scores were 224, 218, 233, 254, and 231. What was his average bowling score for the five games?
- A. 231
  - B. 232
  - C. 233
  - D. 234

PLEASE GO ON ➔

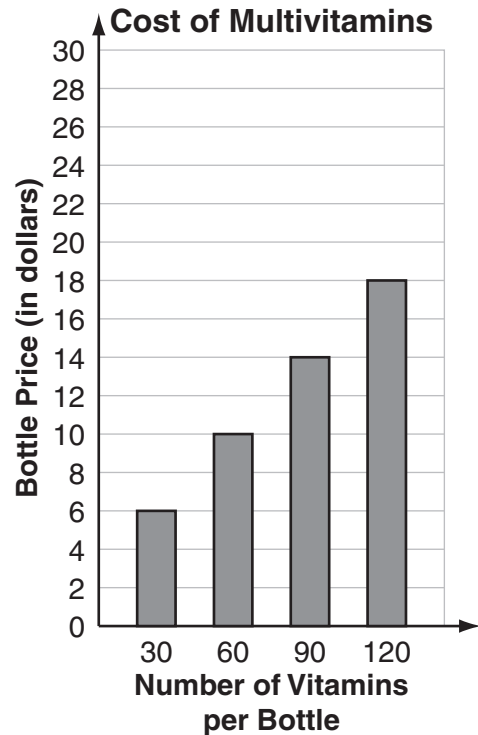
- 13 Sylvia has a compact car with an 8-gallon tank. If the car can travel 29 miles per gallon, how far could it travel on a tank that is only  $\frac{3}{4}$  full?
- A. 58 miles  
 B. 116 miles  
 C. 174 miles  
 D. 232 miles

- 14 Courtney bought a fishbowl and some goldfish.
- The fishbowl costs \$12.
  - Each goldfish costs \$1.99.

Which expression can be used to find the total amount of money Courtney spent if she bought a fishbowl and  $n$  goldfish?

- A.  $12n + 1.99$   
 B.  $(12 + n) \times 1.99$   
 C.  $12 \times (1.99 + n)$   
 D.  $12 + 1.99n$

- 15 A company sells bottles of multivitamins. The bar graph below shows the cost for each bottle.

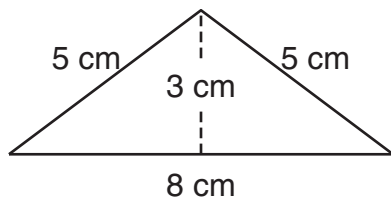


Based on the graph, about how much would a bottle containing 180 multivitamins cost?

- A. \$19  
 B. \$22  
 C. \$26  
 D. \$36

PLEASE GO ON →

- 16 Abby is making a model of a house. The front piece of the roof is shown below.



What is the area of the front piece of the roof?

- A.  $24 \text{ cm}^2$   
 B.  $21 \text{ cm}^2$   
 C.  $20 \text{ cm}^2$   
 D.  $12 \text{ cm}^2$
- 17 The chart below shows the prices of soda and popcorn at a movie theater.

**Prices of Soda and Popcorn**

Size	Soda Price	Popcorn Price
Small	\$1.95	\$3.95
Medium	\$2.95	\$4.50
Large	\$3.95	\$5.25

Mr. Clark bought 3 medium sodas, 1 small soda, and 2 large popcorns for his family. How much did Mr. Clark spend in all?

- A. \$19.30  
 B. \$19.35  
 C. \$21.30  
 D. \$23.30
- 18 A shoe store received a shipment of 120 boxes of sneakers. The number of boxes received in each sneaker size is shown in the table below.

**Sneaker Shipment**

Size	Number of Boxes
6	17
7	20
8	40
9	28
10	15

Nicholas randomly chooses a box from the shipment. What is the probability that the box contains a pair that is size 8 or greater?

- A.  $\frac{8}{120}$   
 B.  $\frac{27}{120}$   
 C.  $\frac{40}{120}$   
 D.  $\frac{83}{120}$

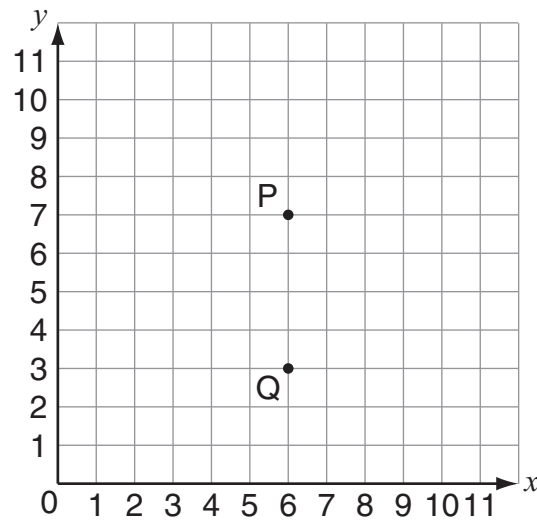
Write your answer to short-answer question 19 in the box provided on page 3 of your practice test answer booklet. Be sure to answer and label all parts (a and b) of the question. Short-answer questions are worth up to 2 points each.

- 19 Heather bought a jewelry box and some bracelets. The costs for the items are listed below.
- jewelry box: \$15
  - bracelets: \$3 each
- a. What is the total cost of 1 jewelry box and 6 bracelets?  
 b. Write an expression to show the total cost of two jewelry boxes and  $b$  bracelets.

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, and c) of the question. Constructed-response questions are worth up to 4 points each.

- 20 Chris plotted point P and point Q on a coordinate grid, as shown below.



- a. What are the coordinates of point P?

Chris wants to draw a right triangle on the coordinate grid using point P and point Q as vertices.

- b. Name the coordinates of a third point Chris could use to draw a right triangle.

Using point P and point Q, Chris wants to draw a different triangle that is congruent to the triangle in part b.

- c. Name the coordinates of a new point Chris could use to draw a triangle congruent to the triangle in part b. Explain or show how you know that the new triangle will be congruent to the one in part b.

