

Grade 5 Mathematics

SESSION 1

You may use your reference sheet and MCAS ruler during this session.

You may not use a calculator during this session.



DIRECTIONS

This session contains eight multiple-choice questions, one short-answer question, and one open-response question. Mark your answers to these questions in the spaces provided in your Student Answer Booklet.

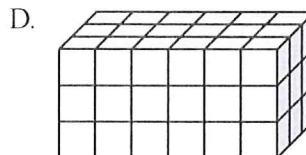
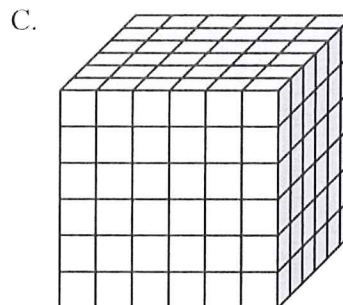
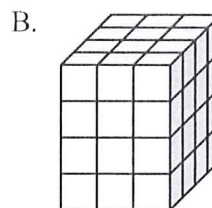
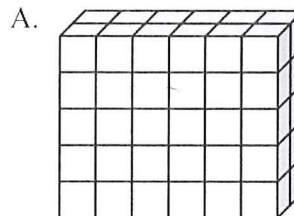
- 1 What is the value of the expression below when $p = 10$?

$$(20 + 30) \div p$$

- A. 2
- B. 5
- C. 23
- D. 60

- 2 Wanda used 1-centimeter cubes to build a right rectangular prism that has a volume of 60 cubic centimeters.

Which of the following could represent the prism that Wanda built?



- 3 Eva has 2 liters of juice and some glasses. She will pour $\frac{1}{4}$ liter of juice into each glass.

What is the total number of glasses Eva can fill with the juice?

- A. 6
- B. 7
- C. 8
- D. 9

Mark your answers to multiple-choice questions 6 through 10 in the spaces provided in your Student Answer Booklet. Do not write your answers in this test booklet. You may do your figuring in the test booklet.

- 6 Which expression is equivalent to 100,000?
- A. 10^3
 - B. 10^4
 - C. 10^5
 - D. 10^6
- 7 Tess evaluated an expression by subtracting 6 from 15 and then multiplying the result by 4. Which of the following could be the expression Tess evaluated?
- A. $(4 \times 6) - 15$
 - B. $4 \times (15 - 6)$
 - C. $(6 + 15) \times 4$
 - D. $6 \times (15 - 4)$
- 8 James is bowling. He knocked down 4 out of 10 bowling pins. What fraction of the bowling pins were **not** knocked down?
- A. $\frac{1}{3}$
 - B. $\frac{2}{3}$
 - C. $\frac{2}{5}$
 - D. $\frac{3}{5}$
- 9 Which of the following types of quadrilaterals **always** has perpendicular sides?
- A. rhombus
 - B. rectangle
 - C. trapezoid
 - D. parallelogram

- 10 What digit is in the hundredths place of 1.258?
- A. 1
 - B. 2
 - C. 5
 - D. 8

Grade 5 Mathematics

SESSION 2

You may use your reference sheet and MCAS ruler during this session.

You may *not* use a calculator during this session.



DIRECTIONS

This session contains eight multiple-choice questions, two short-answer questions, and one open-response question. Mark your answers to these questions in the spaces provided in your Student Answer Booklet.

- 11 A science museum has a fish tank in the shape of a rectangular prism.

- It has a length of 8 feet.
- It has a width of 3 feet.
- It has a height of 4 feet.

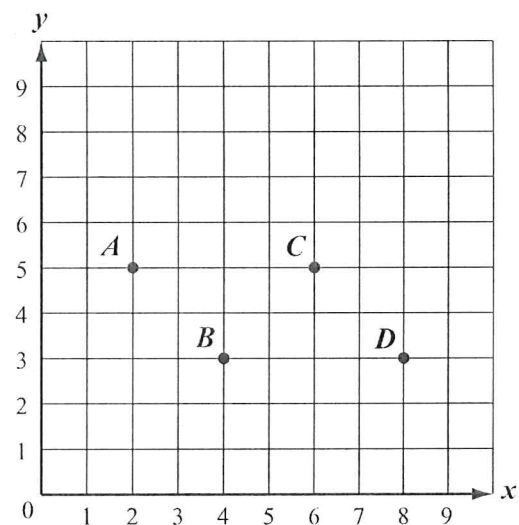
What is the volume of the fish tank?

- A. 15 cubic feet
B. 30 cubic feet
C. 96 cubic feet
D. 136 cubic feet
- 12 What is the value of the expression below?

$$6 - (1 \times 4) - 2$$

- A. 0
B. 4
C. 10
D. 18

- 13 Amy is working on a coordinate plane, as shown below.



Amy put the tip of her pencil at (6, 4). Then she moved the tip of her pencil as described below.

- 3 units right
- 2 units down
- 5 units left
- 1 unit up

Which point on the coordinate plane is the point where Amy stopped?

- A. point *A*
B. point *B*
C. point *C*
D. point *D*

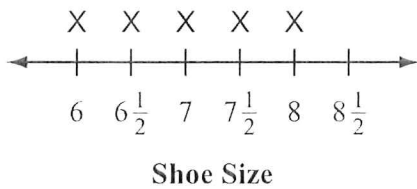
- 14 Which of the following expressions represents a number that is 3 times larger than the sum of 8105 and 186?
- A. $(8105 + 186) \div 3$
 - B. $3 \times (8105 + 186)$
 - C. $8105 + 186 \div 3$
 - D. $3 \times 8105 + 186$
- 15 Which statement about quadrilaterals is true?
- A. Every rectangle is also a parallelogram.
 - B. Every parallelogram is also a rectangle.
 - C. Every rectangle is also a rhombus.
 - D. Every rhombus is also a rectangle.

16 The list below shows the shoe sizes of eight students in a fifth-grade class.

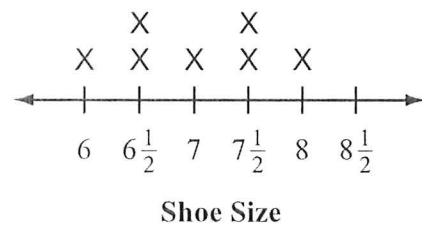
Luke	8	Cara	$6\frac{1}{2}$
Dean	$6\frac{1}{2}$	Leah	6
Wally	$7\frac{1}{2}$	Suzanne	$6\frac{1}{2}$
Kareem	$7\frac{1}{2}$	Becca	7

Which of the following line plots correctly represents the shoe sizes of the students?

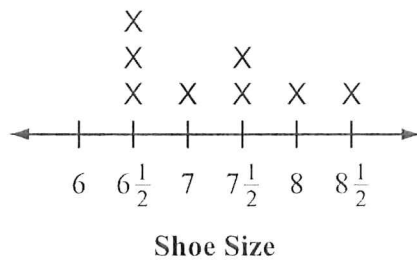
A.



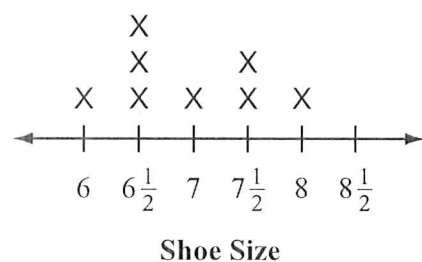
C.



B.



D.



Mark your answers to multiple-choice questions 20 and 21 in the spaces provided in your Student Answer Booklet. Do not write your answers in this test booklet. You may do your figuring in the test booklet.

- 20 Juliana has two pieces of rope.
- The first piece is $1\frac{1}{2}$ meters long.
 - The second piece is 2 meters long.

What is the total length, in centimeters, of the two pieces of rope?

- A. 300 centimeters
- B. 350 centimeters
- C. 3000 centimeters
- D. 3500 centimeters

- 21 The total distance around a running track is $1\frac{5}{8}$ miles. Wayne ran $\frac{1}{4}$ of the track.

Which of the following equations can be used to find d , the distance in miles that Wayne ran?

- A. $\frac{1}{4} \times \frac{13}{8} = d$
- B. $\frac{1}{4} \times \frac{15}{8} = d$
- C. $\frac{4}{1} \times \frac{13}{8} = d$
- D. $\frac{4}{1} \times \frac{15}{8} = d$



PERIMETER (P) FORMULAS

perimeter = distance around

square $P = 4 \times s$
(s = length of a side)

rectangle $P = (2 \times l) + (2 \times w)$
(l = length; w = width)

triangle $P = a + b + c$
(a , b , and c are the lengths of the sides)

VOLUME (V) FORMULAS

rectangular prism $V = l \times w \times h$
(l = length; w = width; h = height)

cube $V = s \times s \times s$
(s = length of an edge)

AREA (A) FORMULAS

square $A = s \times s$
(s = length of a side)

rectangle $A = l \times w$
(l = length; w = width)

triangle $A = \frac{1}{2} \times b \times h$
(b = length of the base;
 h = height)