Tennessee TCAP 2023
Grade 5 Math

Exam Materials
Pages 2 - 18

Answer Key Materials
Page 19

Tennessee Comprehensive Assessment Program

TCAP

Math
Grade 5 Item Release

Spring 2023

TN Department of **Education**

00. What is the value of $\left[6 + 24 \div (2 + 4)\right] \times 2$?

Enter your answer in the space provided.

00. Which expression represents "one half of the sum of 6 and 8"?

    A. $2 \div 6 + 8$

    B. $2 \div (6 + 8)$

    C. $6 + 8 \div 2$

    D. $(6 + 8) \div 2$

*Standards implemented from 2023-24 Tennessee Academic Standards for Math

00. What is $972 \div 27$?

Enter your answer in the space provided.

00. Sammy wrote this expression.

$$2\frac{5}{6} + 1\frac{2}{3}$$

Which expression is equivalent to Sammy's expression?

A. $\dfrac{17}{6} + \dfrac{10}{6}$

B. $\dfrac{10}{6} + \dfrac{2}{3}$

C. $\dfrac{17}{6} + \dfrac{6}{6}$

D. $\dfrac{7}{6} + \dfrac{3}{3}$

00. Tracy hiked three trails on Saturday morning.

- She hiked $1\frac{1}{3}$ miles along the Oak Trail.

- She hiked $\frac{5}{6}$ mile along the Maple Trail.

- She hiked $\frac{3}{4}$ mile along the Pine Trail.

What is the total distance, in miles, that Tracy hiked on Saturday morning?

A. $1\frac{9}{13}$

B. $1\frac{3}{4}$
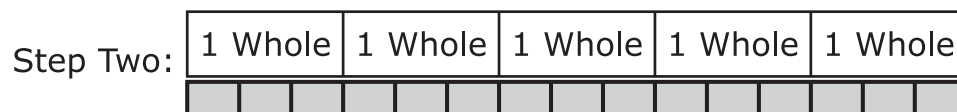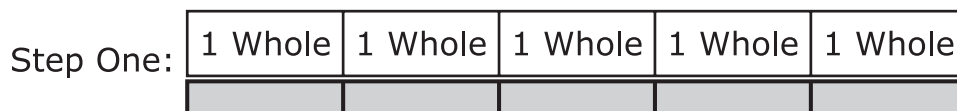
C. $1\frac{11}{12}$

D. $2\frac{11}{12}$

00. When Joe makes a full batch of pancakes, he uses $1\frac{1}{4}$ cups of milk.

How much milk should Joe use when he makes only $\frac{1}{2}$ batch of pancakes?

A. $1\frac{3}{4}$ cups

B. $\frac{3}{4}$ cup

C. $\frac{5}{8}$ cup

D. $\frac{1}{8}$ cup

00. A student used a model to represent a division expression. The two steps the student used are shown.

Step One:

1 Whole	1 Whole	1 Whole	1 Whole	1 Whole

Step Two:

1 Whole	1 Whole	1 Whole	1 Whole	1 Whole

Which expression did the student represent in the model?

A. $\dfrac{1}{3} \div 5$

B. $\dfrac{1}{15} \div 5$

C. $5 \div \dfrac{1}{3}$

D. $5 \div \dfrac{1}{15}$

00. Frank and Mario make number patterns.

- Frank's number pattern begins with 320 and uses the rule of dividing by 4.
- Mario's number pattern begins with 640 and uses the rule of subtracting 80.

Let x represent Frank's number and y represent Mario's number. Which ordered pairs show the first four numbers in each of their patterns?

A. (320, 640), (80, 560), (20, 480), (5, 400)

B. (320, 640), (240, 160), (160, 40), (80, 10)

C. (640, 320), (160, 240), (40, 160), (10, 80)

D. (640, 320), (560, 80), (480, 20), (400, 5)

00. Here is an equation.

$$0.567 \times 10^{\square} = 56.7$$

What number goes in the box to make the equation **true**?

Enter your answer in the space provided.

00. Which three numbers have digits in the hundredths place that stay the same when they are rounded to the nearest hundredth?

Select the **three** correct answers.

A. 0.047

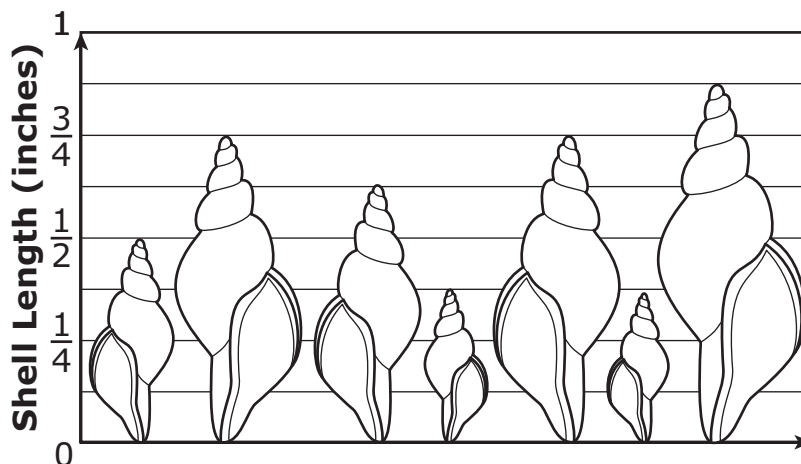**B.** 0.129

C. 25.522

D. 69.808

E. 140.670

F. 607.593

00. Chris used mints and a full 2–liter bottle of soda to demonstrate a volcanic eruption. After the eruption, 798 milliliters of the soda remained inside the bottle.

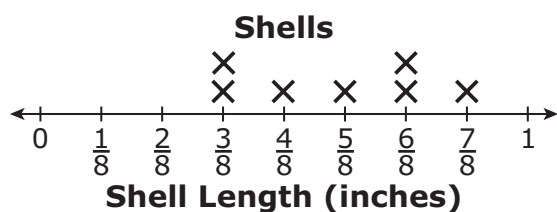What amount of the soda, **in milliliters**, was used during the volcanic eruption?

    A. 1,312

    B. 1,202

    C.   800

    D.   796

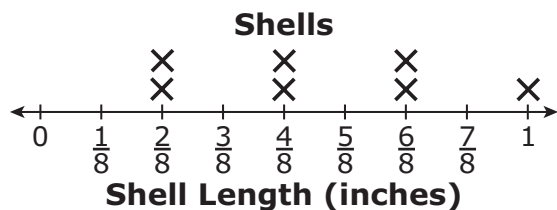**00.** The lengths of some shells are shown in this graph.

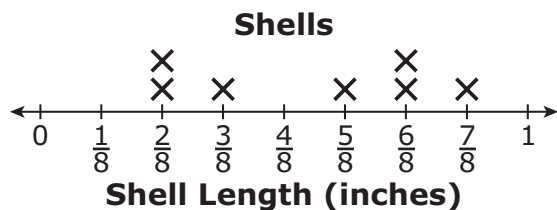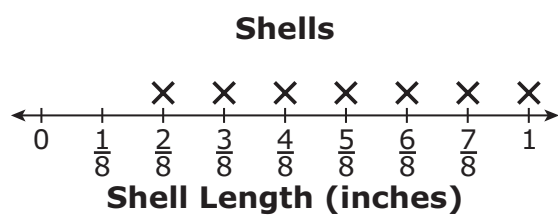Which line plot shows the lengths of all of the shells shown in the graph?

A.

B.

C.

D.

Shells

X X X X X X X

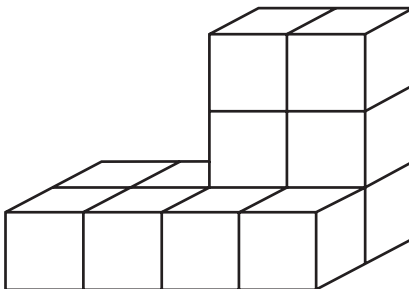0   1/8   2/8   3/8   4/8   5/8   6/8   7/8   1

Shell Length (inches)

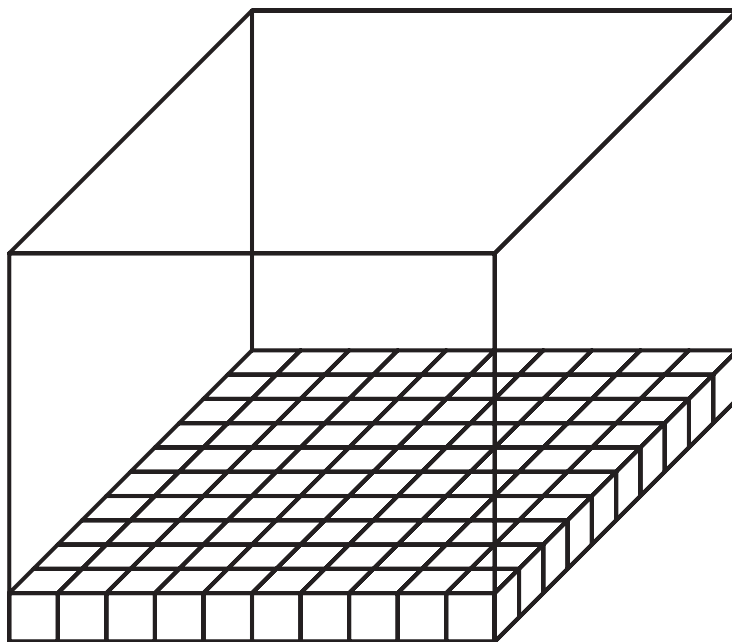**00.** This figure is made of unit cubes.

What is the volume, in cubic units, of the figure?

Enter your answer in the space provided.

00. Roshi has a rectangular-shaped box that he will fill with unit cubes.

- The bottom layer of cubes is 10 units wide and 10 units long.
- When filled, the box will have 8 layers of cubes.

Which expressions represent the total number of unit cubes that will fill the box?

Select the **two** correct answers.

A. $10 \times 10 + 8$

B. $10 \times 10 \times 8$

C. $10 + 10 + 8$

D. $100 + 8$

E. 100×8

00. How are a parallelogram and a rhombus alike?

    A. Each must have all four angles equal in size.

    B. Each must have all pairs of opposite sides parallel.

    C. Each must have all four sides equal in length.

    D. Each must have two acute angles and two obtuse angles.

Metadata- Math

Items

Page Number	UIN	Grade	Item Type	Key	DOK	TN Standards	Calculator
1	TN0025179	5	FIB	20	2	5.OA.A.1	N
2	T5M03S267	5	MC	D	2	5.OA.A.2	Y
3	TN657660	5	FIB	36	2	5.NBT.B.6	N
4	TN0069093	5	MC	A	2	5.NF.A.1	Y
5	TN0011396	5	MC	D	2	5.NF.A.2	Y
6	T5M03S166	5	MC	C	2	5.NF.B.6	Y
7	T5M03S159	5	MC	C	2	5.NF.B.7.b	Y
8	TN604391	5	MC	A	2	5.OA.B.3.b	N
9	TN017041	5	FIB	2	1	5.NBT.A.2	Y
10	TN357689	5	MS	C,E,F	2	5.NBT.A.4	Y
11	TN175286	5	MC	B	2	5.MD.A.1	Y
12	TN421536	5	MC	A	2	5.MD.B.2	Y
14	TN346264	5	FIB	12	1	5.MD.C.4	N
15	TN0069214	5	MS	B,E	2	5.MD.C.5.a	N
16	TN644434	5	MC	B	1	5.G.B.3	Y

Metadata Definitions:

UIN	Unique letter/number code used to identify the item.
Grade	Grade level or Course.
Item Type	Indicates the type of item. MC= Multiple Choice; MS= Multiple Select; FIB = Fill-in-the-blank
Key	Correct answer.
DOK	Depth of Knowledge (cognitive complexity) is measured on a three-point scale. 1 = Recall or simple reproduction of information; 2 = Skills and concepts: comprehension and processing of text; 3 = Strategic thinking, prediction, elaboration.
TN Standards	Primary educational standard assessed.
Calculator	Y for items that permit calculator use.

*Standards implemented from 2023-24 Tennessee Academic Standards for Math