Louisiana Believes

*i*LEAP Test Items

Grade 5 Mathematics

Spring 2014

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DEPARTMENT of EDUCATION
Louisiana Believes

iLEAP MATHEMATICS REFERENCE SHEET—GRADE 5

Use the information below to answer questions on the Math test.

U.S. Unit Conversions
1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet

1 pound = 16 ounces
1 ton = 2,000 pounds

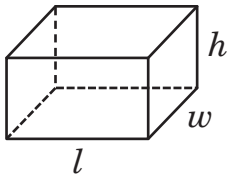
1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours

Metric Unit Conversions
1 meter = 1,000 millimeters
1 meter = 100 centimeters
1 kilometer = 1,000 meters

1 liter = 1,000 milliliters

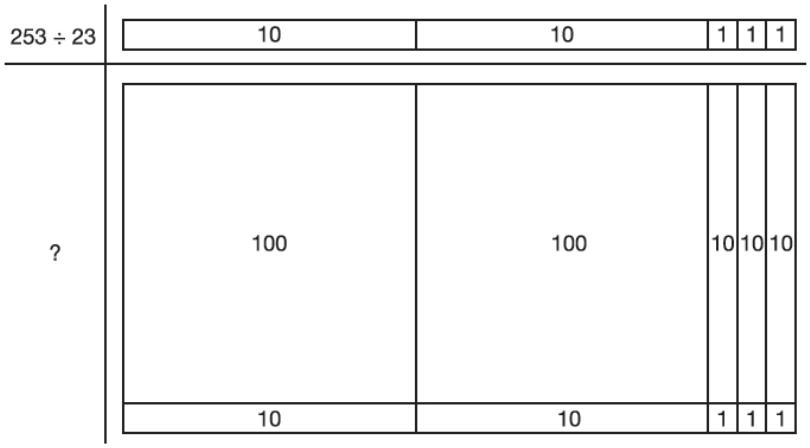
1 kilogram = 1,000 grams

Rectangular Prism



Volume $= l \times w \times h$
Volume $=$ B $\times h$
B $= l \times w$

1. The area model below models the expression 253 ÷ 23.



What is 253 ÷ 23?

A. 10
B. 11
C. 12
D. 13

This item measures aspects of 5.NBT.6
No Calculator
Key: B

2. The amount of gas in the tanks of three lawn mowers is shown in the table below.

Gas in Lawn Mowers

Mower A	Mower B	Mower C
$\frac{2}{8}$ gallon	$\frac{3}{8}$ gallon	$\frac{2}{8}$ gallon

What is the total amount of gas in the three lawn mowers?

A. $\frac{7}{24}$ gallon

B. $\frac{12}{24}$ gallon

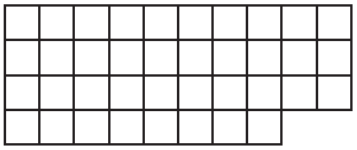
C. $\frac{7}{8}$ gallon

D. $\frac{12}{8}$ gallons

This item measures aspects of 5.NF.2
No Calculator
Key: C

3. Mr. Cole's class is reading a chapter book. Each student in the class will be assigned a certain number of chapters and will be responsible for leading a discussion about them. To be fair, Mr. Cole assigns the same number of chapters to each student. If there are any chapters left over, Mr. Cole will discuss these himself. There are 38 chapters in the book and 16 students in Mr. Cole's class, as modeled below.

Chapters



Students

For how many chapters will Mr. Cole lead the discussion?

A. 2
B. 6
C. 8
D. 22

This item measures aspects of 5.NF.3
No Calculator
Key: B

4. In Tonda's garden, vegetables are planted in $4\frac{19}{20}$ of the rows. Flowers are planted in $3\frac{11}{20}$ of the rows. Which expression could Tonda use to get the **closest** estimate of the difference between the number of rows with vegetables and the number of rows with flowers?

A. $4\frac{1}{2} - 3\frac{1}{2}$

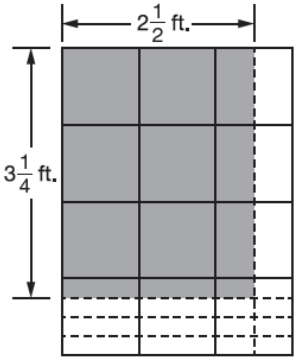
B. $4\frac{1}{2} - 4$

C. $5 - 3\frac{1}{2}$

D. $5 - 4$

This item measures aspects of 5.NF.2
No Calculator
Key: C

5. Shane has a poster that is $2\frac{1}{2}$ feet wide and $3\frac{1}{4}$ feet long. To determine the area of his poster, Shane uses the diagram below.



This item measures aspects of 5.NF.4b
No Calculator
Key: C

What is the area of Shane's poster?

A. 6 square feet

B. $6\frac{3}{4}$ square feet

C. $8\frac{1}{8}$ square feet

D. 12 square feet

This item measures aspects of 5.NF.6
No Calculator
Key: C

6. Wendall baked a pan of 12 brownies, as shown below.

Wendall's Brownies

Wendall gives $\frac{5}{6}$ of the brownies to Stefanie. How many brownies did Stefanie get?

A. 5 brownies
B. 6 brownies
C. 10 brownies
D. 11 brownies

7. A children's storybook contains 32 pages. Last year 226 copies of the book were printed. How many total pages of the storybook were printed?

A. 1,130 pages
B. 6,038 pages
C. 7,122 pages
D. 7,232 pages

This item measures aspects of 5.NBT.5
No Calculator
Key: D

8. Drew's watch weighs $\frac{9}{10}$ of a pound. Sam's watch weighs $\frac{2}{5}$ of a pound. How much heavier is Drew's watch than Sam's watch?

A. $\frac{1}{2}$ of a pound

B. $\frac{5}{7}$ of a pound

C. $\frac{7}{10}$ of a pound

D. $\frac{7}{5}$ pounds

This item measures aspects of 5.NF.1
No Calculator
Key: A

9. The length of Jeremiah's pencil, from eraser to tip, is 6.88 inches. Jeremiah uses his pencil to write an essay, during which he sharpens and erases several times. After writing the essay, the length of Jeremiah's pencil is 5.7 inches. To determine the length of pencil that was used up, Jeremiah subtracts 6.88 – 5.7. His work is shown below.

$$\begin{array}{r} 6.88 \\ -\ 5.7 \\ \hline 0.631 \end{array}$$

Which **best** explains Jeremiah's work?

A. Jeremiah's work is incorrect. When he was done subtracting, he should have only moved the decimal point two places to the left, because 6.88 has two decimal digits.

B. Jeremiah's work is incorrect. He should have lined up the decimal points in both numbers to make sure he was only subtracting digits with the same place value.

C. Jeremiah's work is incorrect. He should have subtracted the decimal portions first (88 – 7 = 81), then the whole portions (6 – 5 = 1) to get an answer of 1.81 inches.

D. Jeremiah's work is correct. He correctly determined that he used up 0.631 inch of his pencil during the essay.

This item measures aspects of 5.NBT.7
No Calculator
Key: B

10. Which statement is equivalent to 10^3?

A. 10 times 3
B. 10 multiplied 3 times
C. 10 followed by 3 zeros
D. 10 times 3 and then add 3 zeros

This item measures aspects of 5.NBT.2
No Calculator
Key: B

11. Ruby had $\frac{5}{6}$ of a yard of ribbon on a spool. She cut off $\frac{3}{6}$ of a yard to tie a bow and $\frac{1}{6}$ of a yard to make a bookmark. How much ribbon did Ruby have left on the spool?

A. $\frac{1}{6}$ of a yard

B. $\frac{2}{6}$ of a yard

C. $\frac{7}{6}$ of a yard

D. $\frac{9}{6}$ of a yard

This item measures aspects of 5.NF.2
No Calculator
Key: A

12. Resa picked $\frac{2}{3}$ of a row of spinach from her garden for supper. How many rows will Resa have picked if she does this for 4 days?

A. $\frac{2}{8}$ of a row

B. 2 rows

C. $2\frac{2}{3}$ rows

D. 8 rows

This item measures aspects of 5.NF.4
No Calculator
Key: C

13. Acha walked $\frac{5}{6}$ of a kilometer in one hour. Kye walked $\frac{2}{9}$ of a kilometer in one hour. How many total kilometers did Acha and Kye walk in one hour?

A. $\frac{10}{54}$ kilometer

B. $\frac{7}{15}$ kilometer

C. $1\frac{1}{18}$ kilometers

D. $1\frac{1}{9}$ kilometers

This item measures aspects of 5.NF.1
No Calculator
Key: C

14. At Jefferson School there are 27 fifth graders. There are twice as many sixth graders as there are fifth graders. There are one third as many fourth graders as there are sixth graders. In total, how many fourth, fifth, and sixth graders are there at Jefferson School?

A. 54
B. 63
C. 90
D. 99

This item measures aspects of 5.NF.6
No Calculator
Key: D

15. Sofia makes hamburger patties that each contain $\frac{2}{5}$ of a pound of hamburger. She wants to make 3 hamburger patties for dinner. How many pounds of hamburger will Sofia need for dinner?

A. $\frac{6}{15}$ of a pound

B. $\frac{5}{8}$ of a pound

C. $1\frac{1}{5}$ pounds

D. $3\frac{2}{5}$ pounds

This item measures aspects of 5.NF.4a
No Calculator
Key: C

16. Ben used $1\frac{1}{10}$ ounces of beads from a jar that originally had $4\frac{6}{7}$ ounces of beads. He then put $3\frac{2}{7}$ ounces of new beads into the jar. Ben uses the expression below to find out how many ounces of beads are now in the jar.

$$4\frac{6}{7} - 1\frac{1}{10} + 3\frac{2}{7}$$

Which is the **best** estimate of how many ounces of beads are now in the jar?

A. 5 ounces
B. 6 ounces
C. 7 ounces
D. 8 ounces

This item measures aspects of 5.NF.2
No Calculator
Key: C

17. A case of fishing line contains 56 spools. Each spool has 220 feet of fishing line on it. How many feet of fishing line are in a case?

A. 2,420 feet
B. 8,636 feet
C. 11,220 feet
D. 12,320 feet

This item measures aspects of 5.NBT.5
No Calculator
Key: D

18. Chase, Joe, and two of their friends collected sea shells. Chase collected $\frac{1}{6}$ of the total sea shells they found. Joe collected $\frac{4}{7}$ of the total sea shells they found. What fraction of the total sea shells collected by the group do Chase and Joe have altogether?

A. $\frac{4}{42}$

B. $\frac{5}{13}$

C. $\frac{7}{24}$

D. $\frac{31}{42}$

This item measures aspects of 5.NF.1
No Calculator
Key: D

19. Adanna exercises for $\frac{1}{2}$ hour every day. For how many total hours does Adanna exercise in 5 days?

A. $\frac{2}{5}$ hour

B. $2\frac{1}{2}$ hours

C. 4 hours

D. 10 hours

This item measures aspects of 5.NF.6
No Calculator
Key: B

20. Ms. Hugon wrote thank-you cards. She mailed $\frac{4}{9}$ of the cards on Monday and $\frac{2}{9}$ of the cards on Tuesday. She mailed all of the remaining cards on Wednesday. What fraction of the cards did Ms. Hugon mail on Wednesday?

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

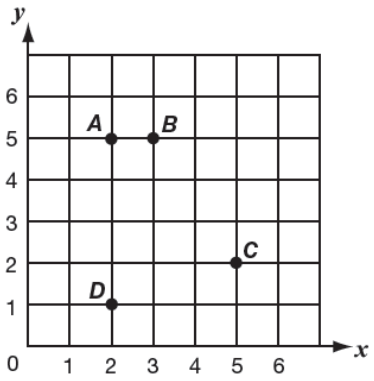
B. $\frac{2}{9}$

C. $\frac{3}{9}$

D. $\frac{6}{9}$

This item measures aspects of 5.NF.2
No Calculator
Key: C

21. Adam was asked to identify a particular point on this grid.



Which point is located at coordinates (2, 5)?

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

This item measures aspects of 5.G.2
No Calculator
Key: A

22. Dino's favorite band has released 273 songs on 21 different albums. Each of the band's albums contains the same number of songs. To determine the number of songs on each album, Dino uses the model below.

273 ÷ 21	10	10	1
?	100	100	10
	10	10	1
	10	10	1
	10	10	1

How many songs are on each album by Dino's favorite band?

A. 13

B. 21

C. 40

D. 130

This item measures aspects of 5.NBT.6
No Calculator
Key: A

23. Robbin's thumbnail is $1\frac{5}{8}$ centimeters long. Her pinky nail is $\frac{4}{5}$ centimeters long. How much longer is Robbin's thumbnail than pinky nail?

A. $\frac{6}{8}$ of a centimeter

B. $\frac{33}{40}$ of a centimeter

C. $1\frac{7}{40}$ centimeters

D. $1\frac{1}{3}$ centimeters

This item measures aspects of 5.NF.1
No Calculator
Key: B

24. Mitzi ran 8 miles. Angelo ran $\frac{3}{4}$ the distance Mitzi ran. To find the distance Angelo ran, he multiplied $8 \times \frac{3}{4}$. Which statement is true about the number of miles Angelo ran?

A. It is less than 8 miles because $\frac{3}{4}$ is less than 1.

B. It is less than 8 miles because 4 is a factor of 8.

C. It is greater than 8 miles because $\frac{3}{4}$ is greater than $\frac{1}{2}$.

D. It is greater than 8 miles because 8 is greater than $\frac{3}{4}$.

This item measures aspects of 5.NF.5b
No Calculator
Key: A

25. What is the number 0.971 written in expanded form?

A. $9 \times 100 + 7 \times 10 + 1 \times 1$

B. $9 \times \frac{1}{100} + 7 \times \frac{1}{10} + 1 \times \frac{1}{1}$

C. $9 \times \frac{1}{1} + 7 \times \frac{1}{10} + 1 \times \frac{1}{100}$

D. $9 \times \frac{1}{10} + 7 \times \frac{1}{100} + 1 \times \frac{1}{1000}$

This item measures aspects of 5.NBT.3a
No Calculator
Key: D

26. On Thursday Warren ran $3\frac{4}{10}$ miles. On Saturday he ran $2\frac{8}{10}$ miles. How many miles did Warren run in all?

A. $5\frac{11}{10}$

B. $5\frac{12}{20}$

C. $6\frac{2}{10}$

D. $6\frac{2}{20}$

This item measures aspects of 5.NF.2
No Calculator
Key: C

27. Sally is making a new tabletop. She wants all four edges to be the same length, and they must meet at 90° angles. Which shape does she want her tabletop to be?

A. square
B. triangle
C. rectangle
D. pentagon

This item measures aspects of 5.G.4
No Calculator
Key: A

28. Sasha read $5\frac{1}{6}$ pages of a book. Marcus read the next $3\frac{3}{4}$ pages of the same book. How many pages of the book were read altogether?

A. $8\frac{1}{3}$

B. $8\frac{2}{5}$

C. $8\frac{11}{12}$

D. $8\frac{11}{24}$

This item measures aspects of 5.NF.1
No Calculator
Key: C

29. Natalie has $\frac{1}{2}$ of a grapefruit. She serves it equally in 3 bowls. What fraction of a whole grapefruit is in each bowl?

A. $\frac{1}{6}$

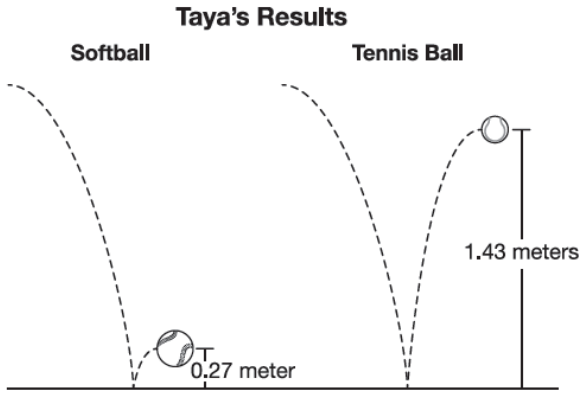
B. $\frac{1}{5}$

C. $\frac{1}{3}$

D. $\frac{3}{2}$

This item measures aspects of 5.NF.7c
No Calculator
Key: A

30. Taya measured the heights of the first bounce of a softball and of a tennis ball. A diagram of her results is shown below.



This item measures aspects of 5.NBT.7
No Calculator
Key: A

How much higher did the tennis ball bounce than the softball?

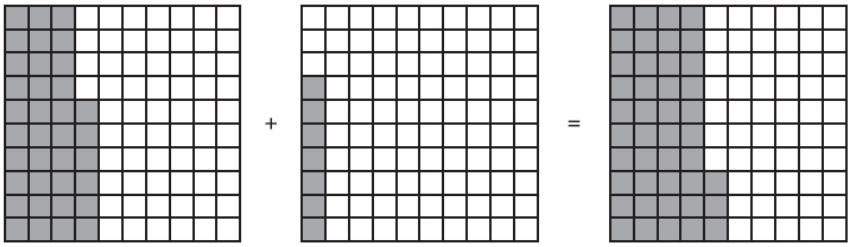
A. 1.16 meters

B. 1.24 meters

C. 1.26 meters

D. 1.33 meters

Use the model with unit squares below to answer question 31.



31. Which equation represents the model with unit squares?

A. 0.14 + 0.01 = 0.15
B. 0.4 + 0.1 = 0.5
C. 0.36 + 0.07 = 0.43
D. 3.6 + 1.7 = 5.3

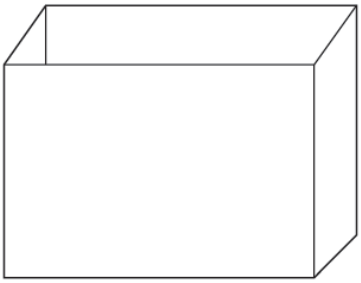
This item measures aspects of 5.NBT.7
Calculator
Key: C

32. The science center charges $8 to see its exhibits only and $14 to see its exhibits and watch a movie. On Monday 65 people paid to see the exhibits only, and 105 people paid to see the exhibits and watch the movie. Which expression could be used to find how much money the science center made on Monday?

A. $(8 \times 65) + (14 \times 105)$
B. $(8 + 65) \times (14 + 105)$
C. $(8 + 14) \times (65 + 105)$
D. $(8 \times 14) + (65 \times 105)$

This item measures aspects of 5.OA.2
Calculator
Key: A

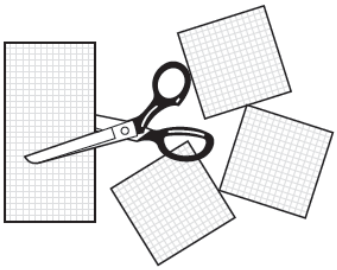
Use the picture below to answer question 33.



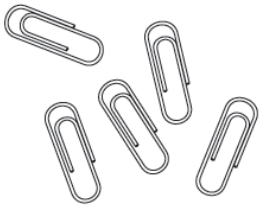
This item measures aspects of 5.MD.3
Calculator
Key: D

33. Which type of objects could **best** be used to measure the volume of this small box?

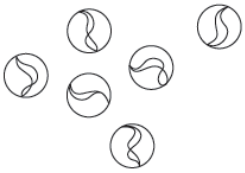
A.



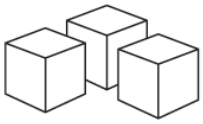
C.



B.



D.



34. Which situation can be answered by solving $8 \div \frac{3}{4}$?

A. The printer can print 8 pages in $\frac{3}{4}$ of a minute. What fraction of a second does it take to print each page?

B. There are 8 dogs in the kennel. Of these dogs, $\frac{3}{4}$ are brown. How many dogs in the kennel are brown?

C. Hiro gave the cashier $8 for a ticket to the zoo. He received 3 quarters in change. How much did the ticket to the zoo cost?

D. Jenna bought 8 yards of fabric to make hats. She uses $\frac{3}{4}$ yard of fabric to make each hat. How many hats can she make from the fabric she bought?

This item measures aspects of 5.NF.7B
Calculator
Key: D

35. One centimeter is approximately 0.393701 of an inch long. What is 0.393701 rounded to the nearest thousandth and hundredth?

A. thousandth: 0.39
hundredth: 0.4

B. thousandth: 0.394
hundredth: 0.39

C. thousandth: 0.393
hundredth: 0.39

D. thousandth: 0.3937
hundredth: 0.394

This item measures aspects of 5.NBT.4
Calculator
Key: B

36. Rawan is making bowls for Pat and Debra. Debra's bowl will be $\frac{5}{4}$ the size of Pat's bowl. Which statement correctly compares the size of Debra's bowl to the size of Pat's bowl?

A. Debra's bowl is smaller than Pat's bowl because $\frac{5}{4} < 1$.

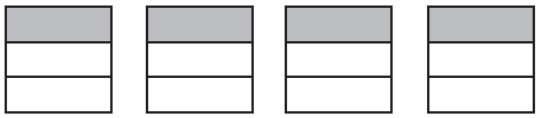
B. Debra's bowl is larger than Pat's bowl because $\frac{5}{4} > 1$.

C. Debra's bowl is smaller than Pat's bowl because $4 < 5$.

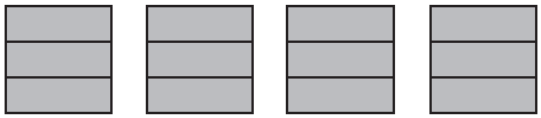
D. Debra's bowl is larger than Pat's bowl because $4 > 1$ and $5 > 1$.

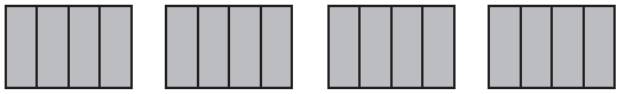
This item measures aspects of 5.NF.5B
Calculator
Key: B

37. Jarron has 4 pounds of strawberries. He sells the strawberries in $\frac{1}{3}$-pound containers. Which model has a shaded region that represents the correct number of containers of strawberries Jarron has to sell?

A.  $= \frac{4}{3}$ containers

B.  $= \frac{4}{4}$ container

C.  = 12 containers

D.  = 16 containers

This item measures aspects of 5.NF.7C
Calculator
Key: C

38. Greta has two ice-cube trays. The smaller tray makes exactly 8 ice cubes at a time. The larger tray makes exactly 14 ice cubes at a time. To show the number of ice cubes made by the ice-cube trays, she makes two patterns using the rules

- "Add 8" and start at 0 for the smaller tray and
- "Add 14" and start at 0 for the larger tray.

Which statement about the two number patterns is true?

A. The number 28 is in both number patterns.
B. The number 56 is in both number patterns.
C. The "Add 8" pattern has fewer numbers than the "Add 14" pattern.
D. The "Add 8" pattern does not have any of the same numbers as the "Add 14" pattern.

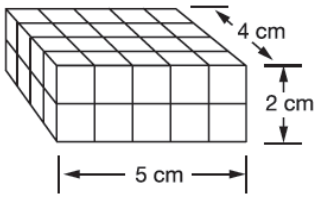
This item measures aspects of 5.OA.3
Calculator
Key: B

39. Compare the numbers 26.104 and 26.140. Which expression below correctly compares the two numbers?

A. $26.140 > 26.104$
B. $26.140 < 26.104$
C. $26.104 = 26.140$
D. $26.104 > 26.140$

This item measures aspects of 5.NBT.3b
Calculator
Key: A

40. Frank stacked a group of centimeter (cm) blocks on the floor.



Which expression correctly shows the volume of Frank's group of blocks?

A. 5 cm + 4 cm + 2 cm
B. (5 cm + 2 cm) × 4 cm
C. 5 cm × 4 cm × 2 cm
D. (4 cm + 2 cm) × 5 cm

This item measures aspects of 5.MD.5a
Calculator
Key: C

41. One roll of packaging tape has 55 yards of tape. A shipping company uses 3 yards of tape to package each of its large-sized boxes. How many large-sized boxes can the company package with one roll of tape?

A. $\frac{3}{55}$ of a box

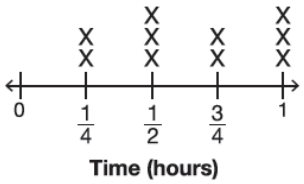
B. $\frac{52}{55}$ of a box

C. $\frac{52}{3}$ boxes

D. $\frac{55}{3}$ boxes

This item measures aspects of 5.NF.3
Calculator
Key: D

42. A physical therapist tracks the length of time she spends with each patient for one day on the line plot below.



How long does the physical therapist spend treating all of her patients on this day?

A. $4\frac{1}{4}$ hours

B. $6\frac{1}{2}$ hours

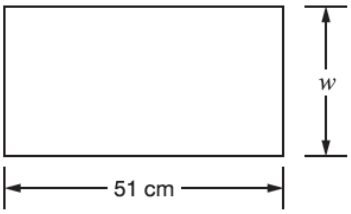
C. 7 hours

D. 10 hours

This item measures aspects of 5.MD.2
Calculator
Key: B

43. The area of Maude's painting canvas is 2,091 square centimeters (cm^2). A drawing of her canvas is shown below.

Painting Canvas



The equation $51 \times w = 2{,}091$ can be used to find the width, w, of the canvas. Maude correctly estimates that the width of the canvas is close to 40 cm. Which statement **most likely** explains Maude's reasoning?

A. Maude's canvases are usually about 10 cm longer than they are wide, and 51 cm is close to 10 cm more than 40 cm.

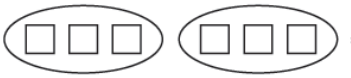
B. The width must be shorter than 51 cm, and 40 cm is shorter than 51 cm.

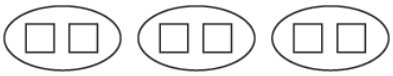
C. The length is close to 50 cm, and 50 cm times 40 cm is 2,000 cm^2, which is close to the area.

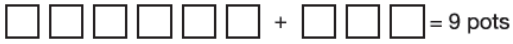
D. The area, 2,091 cm^2, minus the length, 51 cm, equals 40 cm.

This item measures aspects of 5.NBT.6
Calculator
Key: C

44. Gary has 6 wheelbarrows full of dirt for filling plant pots. He uses $\frac{1}{3}$ of a wheelbarrow of dirt to fill each pot. Which model shows how many pots Gary can fill with dirt?

A.  = 2 pots

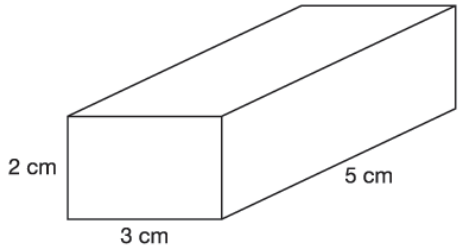
B.  = 3 pots

C.  = 9 pots

D.  = 18 pots

This item measures aspects of 5.NF.7b
Calculator
Key: D

45. Michael is designing a box. The design is shown below.



What is the volume, in cubic centimeters (cm^3), of the box Michael is designing?

A. 10 cm^3
B. 21 cm^3
C. 25 cm^3
D. 30 cm^3

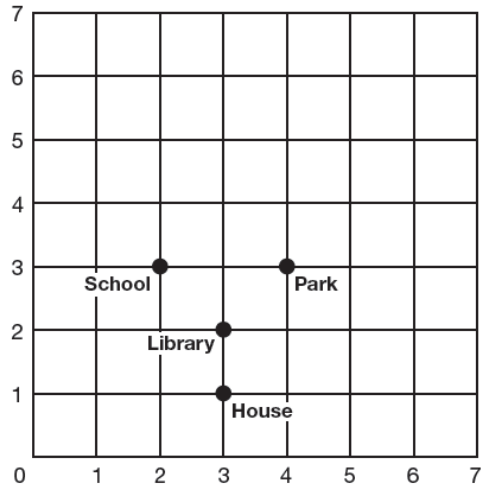
This item measures aspects of 5.MD.5b
Calculator
Key: D

46. What is 879.147 rounded to the nearest tenth?

A. 879.1
B. 879.15
C. 879.2
D. 880.0

This item measures aspects of 5.NBT.4
Calculator
Key: A

47. Kendra wants to return her books to the library.

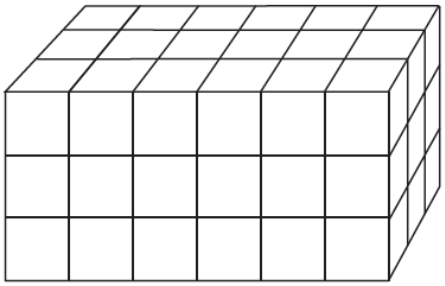


Which ordered pair represents the library?

A. (3, 2)
B. (2, 3)
C. (3, 1)
D. (4, 3)

This item measures aspects of 5.G.1
Calculator
Key: A

48. Hellen built the shape shown below at the beach.



She built it by using bricks of sand. Each brick has a volume of 1 cubic foot. What is the volume of the shape Hellen built?

A. 27 cubic feet
B. 36 cubic feet
C. 45 cubic feet
D. 54 cubic feet

This item measures aspects of 5.MD.4
Calculator
Key: D

49. Stacy was wrapping presents. She used $2\frac{1}{2}$ feet of ribbon for each present. How many inches of ribbon did Stacy use for each present?

A. $2\frac{1}{2}$ inches

B. $6\frac{1}{2}$ inches

C. 30 inches

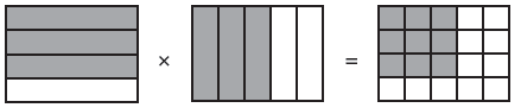
D. 36 inches

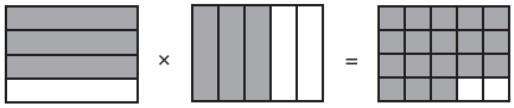
This item measures aspects of 5.MD.1
Calculator
Key: C

50. Which fraction model shows the equation $\frac{3}{4} \times \frac{3}{5} = \frac{9}{20}$?

A. 

B. 

C. 

D. 

This item measures aspects of 5.NF.4a
Calculator
Key: C

This item measures aspects of 5.OA.2
Calculator

Write your answers to questions 51 and 52 in the spaces provided. The questions have more than one part. Show all the work you do to find your answers. Even if you cannot answer all parts, answer as many as you can. You may still get points for answering part of a question. Be sure to write clearly.

You MAY use a calculator for this session.

51. Caleb works for a company that makes and sells canned soup.

A. Caleb's manager uses the expression below to calculate Caleb's pay, in dollars, for one week.

$$40 \times 10 + 6 \times 15$$

What is Caleb's total pay for one week?

B. The company makes vegetable soup in batches of 1,000 cans. Caleb's manager lists the costs of the supplies for one batch: $123 for the metal cans, $31 for the paper labels, and $378 for the ingredients.

Write an expression that can be used to find the total cost of supplies for 60 batches of vegetable soup. Do **not** calculate the actual cost.

C. The company has 45,896 cans of chicken soup that are ready for shipping. It ships soup in boxes that contain 48 cans each. The company receives an order for 365 boxes of chicken soup.

How many cans of chicken soup will the company have left over after it ships the order? Show or explain how you found your answer.

Grade 5

Scoring Rubric	
4	The student earns 4 points.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the concept being measured.
0	The student's response is incorrect or irrelevant to the skill or concept being measured.
B	The student provides no response.

Sample Answer:

Part A. $490

Part B. $60 \times (123 + 31 + 378)$

Part C. $48 \times 365 = 17{,}520$ cans ordered
$45{,}896 - 17{,}520 = 28{,}376$ cans left over

Points Assigned:

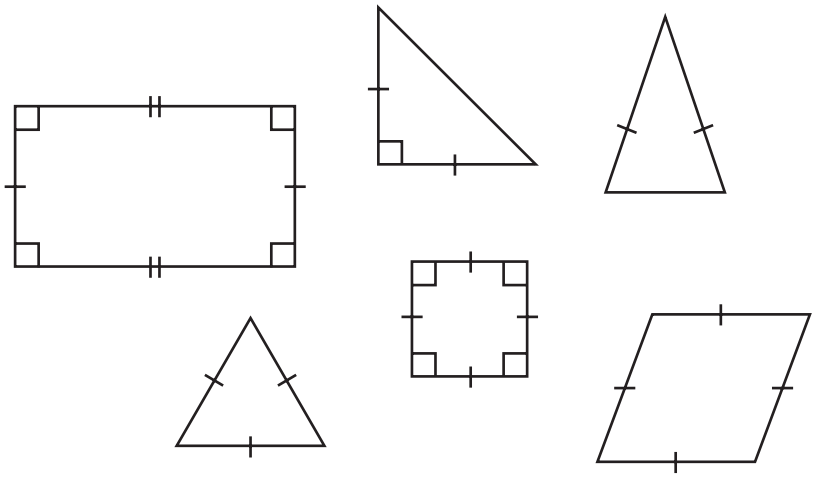
Part A. 1 point
1 point for $490

Part B. 1 point
1 point for a correct expression

Part C. 2 points
1 point for 28,376 cans
AND
1 point for having a correct and complete explanation or showing correct work

This item measures aspects of 5.G.4
Calculator

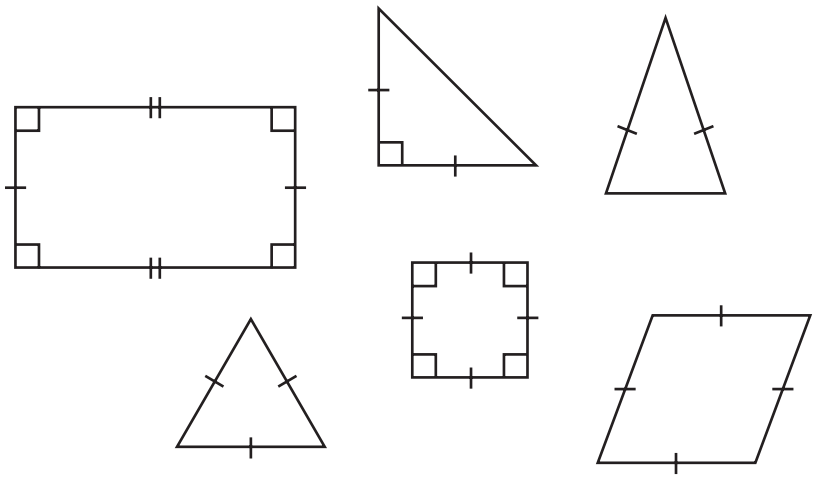
52. John has floor tiles of different shapes. These are the different shapes John has.



A. Sort the 6 shapes into 2 different groups. Label the center of each shape with either a 1 or a 2 to show which group you put it in.

B. Using mathematical terms, explain how you sorted these shapes.

C. Using a different method from part A, sort the shapes again. Label the center of each shape with either an A or a B to show which group you put it in.

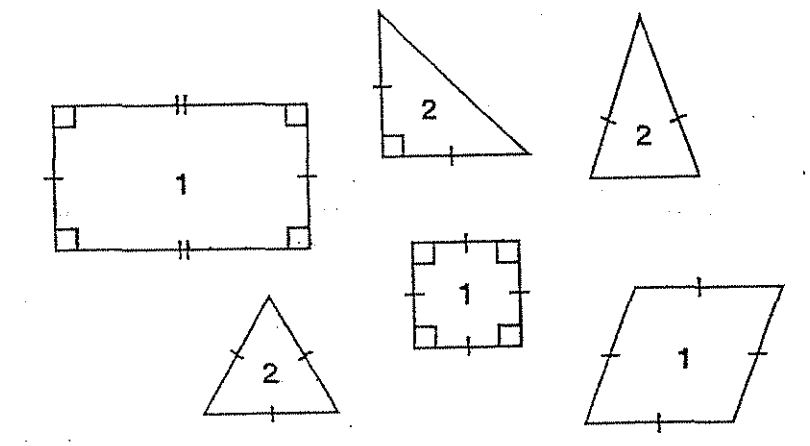


D. Using mathematical terms, explain how you sorted the shapes from part C.

4	The student earns 4 points.
3	The student earns 3 to 3 ½ points.
2	The student earns 2 to 2 ½ points.
1	The student earns ½ to 1½ points. **OR** The student shows minimal understanding of how to classify and describe the properties of two-dimensional shapes.
0	The student's response is incorrect or irrelevant to the skill or concept being measured.
B	No Response.

Correct Answers:

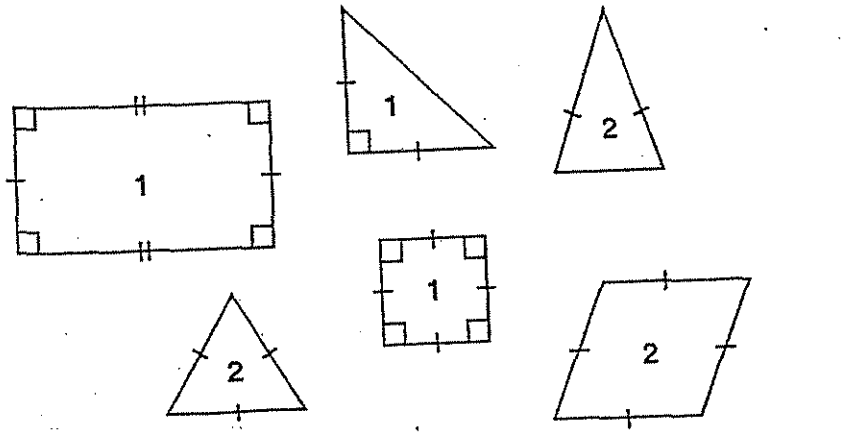
Part A. Example: The following are only 2 examples of student responses to this item. There are many ways the student could sort the shapes.



Part B. Example, based on example A: I sorted the shapes by triangles and quadrilaterals.

Correct Answers (con't):

Part C. Example:



Part D. Example, based on example B: I sorted the shapes by whether they contained right angles or did not contain right angles.

Points Assigned:

Part A. 1 point
1 point if the student creates and labels two groups including all shapes
OR
½ point if the student sorts no fewer than four of the figures into two groups

Part B. 1 point
1 point if the student correctly uses mathematical terms to characterize sorting criteria exhibited by the grouping created in Part A.
OR
½ point if the student uses no more than one of the mathematical terms in the explanation incorrectly

Part C. 1 point
1 point if the student regroups all the figures using a different attribute(s) than in Part A
OR
½ point if the student regroups no fewer than four of the figures using a different attribute(s) than in Part A.

Part D. 1 point
1 point if the student correctly uses mathematical terms to characterize sorting criteria exhibited by the groupings created in Part C
OR
½ point if the student uses no more than one of the mathematical terms in the explanation incorrectly

SCORING NOTE: Parts A and C are contingent on the responses given in Parts B and D.