Louisiana Believes

Grade 7 Math Practice Test

2013-2014

DEPARTMENT of EDUCATION
Louisiana Believes

Session 1—Math (No Calculator)

Write your answers for questions 1 through 30 in the spaces provided on page 35, session 1 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.

You may NOT use a calculator for this session.

1. Which equation is true?

   A. $\dfrac{5}{8} = -\left(\dfrac{-5}{-8}\right)$

   B. $\dfrac{-3}{-4} = -\dfrac{3}{4}$

   C. $-\left(\dfrac{12}{-17}\right) = \dfrac{12}{17}$

   D. $\dfrac{9}{-13} = -\left(\dfrac{-9}{13}\right)$

2. Yvonne used 5 tablespoons of butter for a recipe. For a second recipe she used 10% less butter than she did for the first recipe. The total amount of butter, in tablespoons, she used for both recipes can be found using the expression below.

   5 + 5 – 5(10%)

   Which other expression can be used to find the amount of butter, in tablespoons, she used for both recipes?

   A. 10 – 5%

   B. 10 – 50%

   C. 5 + 5(0.9)

   D. 5 + 5(1 – 10)

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3. The current temperature is –7°C. The high temperature yesterday was as many degrees above 0°C as the current temperature is below 0°C. Which expression could be used to find the number of degrees between the current temperature and yesterday's high temperature?

   A. $0 - 7$

   B. $-7 + 7$

   C. $7 + 0$

   D. $7 + 7$

4. Michael paid a total of $48 for 4 pizzas. He used a coupon for $4 off the entire order. The equation below can be used to determine the regular price of 1 pizza, p.

   $$4p - 4 = 48$$

   What is the regular price of 1 pizza?

   A. $11

   B. $12

   C. $13

   D. $16

5. Diana had a coupon for c dollars off of each box of crackers. Diana bought 2 boxes of crackers for $4.50 – c$ dollars each. She also bought 8 cans of soup for s dollars each. The total amount, in dollars, she spent on the cans of soup and boxes of crackers is represented by the expression below.
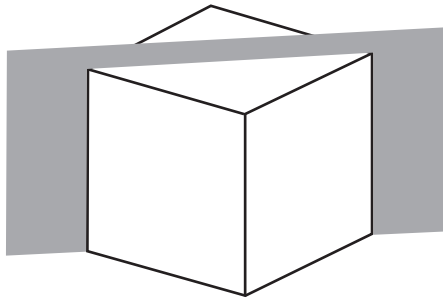
   $$2(4.50 - c) + 8s$$

   Which expression also represents the total amount, in dollars, she spent?
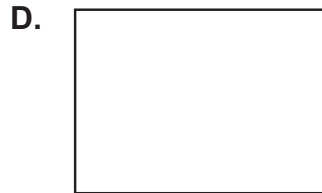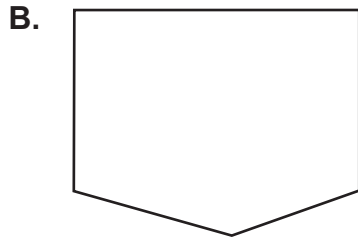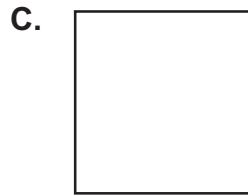
   A. $6.50 - 2c + 8s$

   B. $6.50 - 2c + 10s$

   C. $9 - c + 8s$

   D. $9 - 2c + 8s$

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6. **Use the diagram below to answer the question.**

Which shape **best** represents the 2-dimensional shape formed by the slice made by the plane through the vertices of the cube shown?

A.

C.

B.

D.

7. Nadia will survey 50 students in her town to find out what their favorite summertime activity is. Which group would likely give the **best** representation for her survey?

   A. 50 students at a library

   B. 50 students in her school

   C. 50 students at a shopping mall

   D. 50 students taking swimming lessons

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8. Tracy has $35 to buy comic books and to pay for a movie ticket. Each comic book costs $3. The movie ticket costs $10. Which inequality can be used to determine how many comic books, *b*, Tracy can buy?

    A. $35 - 3b \le 10$

    B. $35 - 3b \ge 10$

    C. $35 - 10b \le 3$

    D. $35 - 10b \ge 3$

9. **Use the number line below to answer the question.**
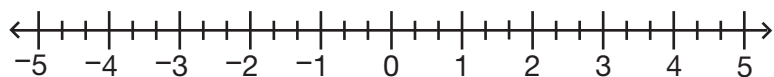
Which number is 4 units from −1?

    A. −3

    B. −4

    C. 3

    D. 4

10. A roll of 40 quarters weighs 8 ounces. Which proportion can be used to find the weight in ounces, *w*, of 200 quarters?

    A. $\dfrac{40}{8} = \dfrac{200}{w}$

    B. $\dfrac{40}{w} = \dfrac{8}{200}$

    C. $\dfrac{40}{200} = \dfrac{w}{8}$

    D. $\dfrac{40}{8+w} = \dfrac{w}{200}$

11. Briana biked 2.82 miles on Monday, 3.75 miles on Wednesday, and 2.13 miles on Friday. Briana estimated the total distance she biked. Which statement correctly compares an estimate of the total distance with the exact total distance that Briana biked?

    A. The estimate 2 + 3 + 2 is smaller than the exact answer but is within 1 mile.

    B. The estimate 2 + 4 + 2 is greater than the exact answer but is within 1 mile.

    C. The estimate 3 + 4 + 2 is smaller than the exact answer but is within 1 mile.

    D. The estimate 3 + 4 + 2 is greater than the exact answer but is within 1 mile.

12. Donna fed $\frac{1}{11}$ of the chickens at a farm. Which decimal is equal to the fraction of chickens Donna fed?

    A. $0.\overline{09}$

    B. $0.0\overline{9}$

    C. $0.\overline{01}$

    D. $0.0\overline{1}$

13. It is highly likely that Malika will randomly select the letter A from a group of letters. From which group of letters could Malika be selecting?

    A. A, E, I, O, U

    B. A, B, C, A, D

    C. A, F, A, G, A, H

    D. A, A, J, A, A, K

Session 1—Math (No Calculator)

14. A box of sunflower seeds contains p packets. Each packet of sunflower seeds contains s seeds. Which equation can be used to find the number of sunflower seeds in a box, b?
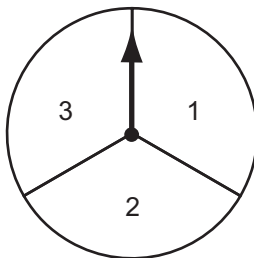
A. $p = sb$

B. $p = \dfrac{s}{b}$

C. $b = ps$

D. $b = \dfrac{p}{s}$

15. Ariana is playing a game. For each of her turns, she rolls a number cube labeled with the numbers 1 through 6. She also spins the spinner shown below.

To win the game Ariana needs to roll a 3 and spin a 3 on her next turn. What is the probability that Ariana will win the game on her next turn?

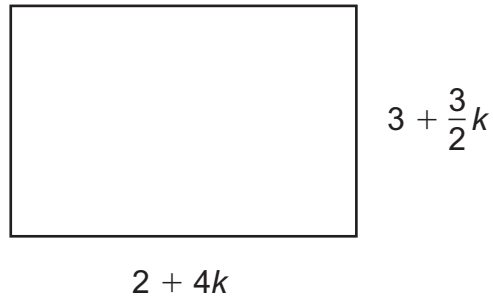**A.** $\dfrac{1}{18}$

B. $\dfrac{1}{9}$

C. $\dfrac{1}{6}$

D. $\dfrac{1}{3}$

16. A school is designing two parking lots. The design for the first parking lot is shown below.

First Parking Lot Design

$3 + \dfrac{3}{2}k$

$2 + 4k$

The second parking lot is being designed so that its perimeter is $\dfrac{3}{4}$ of the perimeter of the first parking lot. The perimeter of the second parking lot can be represented by the expression shown below.

$$\frac{3}{4}\left(2(2 + 4k) + 2\left(3 + \frac{3}{2}k\right)\right)$$

Which other expression also represents the perimeter of the second parking lot?

A. $\dfrac{15}{2} + \dfrac{33}{4}k$

B. $\dfrac{15}{2} + 11k$

C. $9 + 9k$

D. $10 + 11k$

17. **Use the expression below to answer the question.**

$$-\frac{3}{4} \times \frac{2}{5}$$

Which situation can be modeled by the expression?

A. Zach owes $\frac{3}{4}$ of the original price of his car. Each month he pays $\frac{2}{5}$ of the original price. How many months will it take Zach to pay off his car?

B. Zach owes $\frac{3}{4}$ of the original price of his car. Each month he pays $\frac{2}{5}$ of how much he still owes on the car. What fraction of the original price does Zach owe after this month's payment?

C. Abdi owes Kim $\frac{3}{4}$ of a dollar. He needs to borrow more money from Kim. Abdi then borrows $\frac{2}{5}$ of how much he owes. By what fraction of a dollar does the amount Abdi owes Kim change?

D. Abdi owes Kim $\frac{3}{4}$ of a dollar. He pays her $\frac{2}{5}$ of how much he owes. What fraction of a dollar does Kim receive from Abdi?

18. Angles F and G are complementary angles. Angles G and H are supplementary angles. The degree measure of each angle is a whole number. What is the smallest possible measure of angle H?

A. 1°

B. 89°

C. 91°

D. 179°

**19.** Chico is saving for new shoes that cost $87. He already has $9 saved, and he will save the same amount each week. Chico wants to buy the shoes in 6 weeks. The inequality shown below can be used to determine x, the amounts that Chico can save each week and still buy the new shoes in 6 weeks.

$$9 + 6x \geq 87$$

What is the least amount Chico can save each week and still buy the new shoes in 6 weeks?

A. $9

B. $13

C. $15

D. $16

20. In a game, Janeesa started with 0 points. She then earned 50 points, lost 80 points, and earned 10 points. Which number line shows Janeesa's ending score in the game?

A.

B.

C.

D.
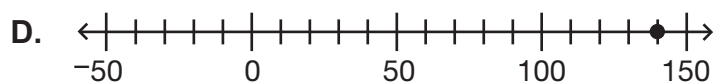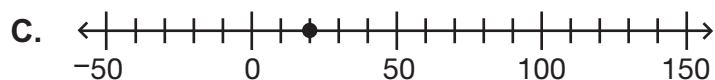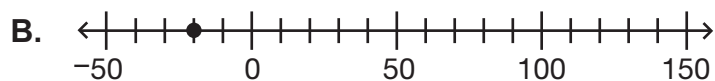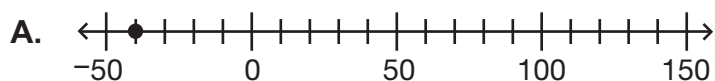
21. Which situation can be represented by the equation $y = 8x$?

    A.   Nilay bought x items at a store. Each item costs $8. Nilay spent a total of y dollars at the store.

    B.   Nilay baked y batches of cookies. There were 8 cookies in each batch. Nilay baked a total of x cookies.

    C.   Nilay correctly answered x questions on a quiz. Each question was worth y points. Nilay received a total of 8 points on the quiz.

    D.   Nilay earned $8 for babysitting. He also earned x dollars for mowing lawns. Nilay earned a total of y dollars for babysitting and mowing lawns.

22. Tamara is trying to determine if a greeting card maximizes the area of her photo. The photo on the greeting card is $2\frac{1}{4}$ inches by $3\frac{3}{4}$ inches. Tamara estimated the area of the photo. Which statement correctly compares the estimated area and the exact area of the photo?

    A.   The estimate 2 × 4 is larger than the exact answer and is within 1 square inch.

    B.   The estimate 2 × 4 is smaller than the exact answer and is within 1 square inch.

    C.   The estimate 2 × 3 + 1 is larger than the exact answer and is within 1 square inch.

    D.   The estimate 2 × 3 + 1 is smaller than the exact answer and is within 1 square inch.

23. Use the equation below to answer the question.

$$\left(-\frac{1}{3}\right) \div 27 = x$$

Which equation could be solved to also find x?

    A. $-27 \times 3 = x$

    B. $-27 \div 3 = x$

    C. $-1 \div (27 \div 3) = x$

    D. $-1 \div (27 \times 3) = x$

24. Vincent bought a 25-pound bag of rice. He cooked 6.25 pounds of the rice. He stored the rest of the rice in $3\frac{3}{4}$-pound portions. What is the maximum number of $3\frac{3}{4}$-pound portions he stored?

    A. 2.5

    B. 3.4

    C. 5.0

    D. $6.\overline{6}$

25. Divide.

$$-1\frac{1}{5} \div -1\frac{5}{6}$$

    A. $-\dfrac{11}{5}$

    B. $-\dfrac{36}{55}$

    C. $\dfrac{36}{55}$

    D. $\dfrac{11}{5}$

26. Use the expression below to answer the question.

$$-\frac{6}{15} + \frac{10}{22}$$

Which set of steps correctly solves the expression?

A.
$$-\frac{6}{15} + \frac{10}{22}$$
$$\frac{6}{15} - \frac{10}{22}$$
$$\frac{2}{5} - \frac{5}{11}$$
$$\frac{22}{55} - \frac{25}{55} = -\frac{3}{55}$$

C.
$$-\frac{6}{15} + \frac{10}{22}$$
$$\frac{10}{22} - \frac{6}{15}$$
$$\frac{5}{11} - \frac{2}{5}$$
$$\frac{5}{11} - \frac{2}{5} = -\frac{2}{11}$$

B.
$$-\frac{6}{15} + \frac{10}{22}$$
$$\frac{6}{15} - \frac{10}{22}$$
$$\frac{2}{5} - \frac{5}{11}$$
$$\frac{2}{5} - \frac{5}{11} = \frac{2}{11}$$

D.
$$-\frac{6}{15} + \frac{10}{22}$$
$$\frac{10}{22} - \frac{6}{15}$$
$$\frac{5}{11} - \frac{2}{5}$$
$$\frac{25}{55} - \frac{22}{55} = \frac{3}{55}$$

27. Mr. Garcia needs at least 60 paintbrushes for his art classes. He has 22 paintbrushes already and will buy more paintbrushes in packages of 8. Which inequality can be used to find how many packages of paintbrushes, p, Mr. Garcia needs to buy in order to have at least 60 paintbrushes?

A. $8p - 22 \le 60$

B. $8p - 22 \ge 60$

C. $8p + 22 \le 60$

D. $8p + 22 \ge 60$

28. **Use the expression below to answer the question.**

$$20 + 8y - 9y - 21$$

Which expression is equivalent?

A. $2(10 + 4y - 7y - 19)$

B. $2(10 + 4y) - 3(3y - 7)$

C. $4(5 + 2y - 5y - 17)$

D. $4(5 + 2y) - 3(3y + 7)$

29. Mr. Fletcher has a box containing bags of different types of chips. The number of bags and types of chips are shown in the table below.

Bags of Chips

| Type of Chips	Number of Bags
plain	3
corn	8
nacho	5
cheddar	4

He will randomly give one bag of chips to each of his 20 students. Nelson is one of the students in Mr. Fletcher's class. Which statement about the likelihood of Nelson receiving different types of chips is true?

A. Nelson is less likely to receive either plain or nacho chips than cheddar chips.

B. Nelson is twice as likely to receive cheddar chips as he is to receive corn chips.

C. Nelson is equally as likely to receive corn chips as he is to receive either plain or nacho chips.

D. Nelson is more likely to receive nacho chips than plain chips and less likely to receive nacho chips than cheddar chips.

30. Rodney is going to perform an experiment. He will do multiple trials of flipping a coin once and then spinning the spinner shown below once.

Rodney's Spinner
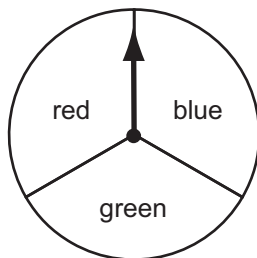
Rodney needs to create a model to represent his sample space of the experiment. In the model he will use the following abbreviations: H = heads, T = tails, R = red, B = blue, and G = green. Which model could Rodney use to **best** represent the sample space for his experiment?

A.   HR   TR   RB

     HB   TB   BG

     HG   TG   GR

C.   HR   HB   HG

     RH   BH   GH

     TR   TB   TG

     RT   BT   GT

B.

D.

STOP

Math—Sessions 1, 2, and 3
GENERAL INSTRUCTIONS

The Math test has three sessions, two with multiple-choice questions and one with constructed-response questions. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

Session 2—Math (Calculator)

Write your answers for questions 31 through 60 in the spaces provided on page 36, session 2 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.

You MAY use a calculator for this session.

31. The prices for various numbers of pounds of apples at several stores are shown in the table below.

Apple Prices

Store	Pounds of Apples	Price
Jerri's Fresh Produce	5	$10.25
Parson's Market	6	$11.34
Carol's Apple Orchard	8	$15.44
Ed's Green Grocery	9	$18.99

For which store would 7 pounds of apples cost exactly $13.23?

A. Jerri's Fresh Produce

B. Parson's Market

C. Carol's Apple Orchard

D. Ed's Green Grocery

32. Megan uses $\frac{2}{3}$ cup of almonds to make 4 cups of trail mix. Using this same proportion, how many cups of almonds would Megan need to make 9 cups of trail mix?

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

B. $1\frac{7}{12}$ cups

C. $2\frac{11}{12}$ cups

D. $3\frac{3}{8}$ cups

33. The distance on a map between the entrance of a park and a waterfall inside the park is $4\frac{1}{2}$ inches.

Park Map
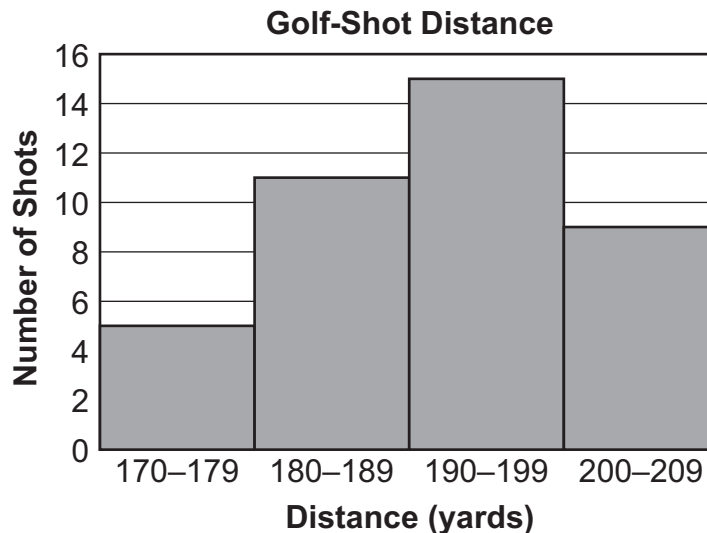

Entrance ✗ —————————— waterfall

$4\frac{1}{2}$ inches

Scale: 3 inches = $2\frac{1}{2}$ miles
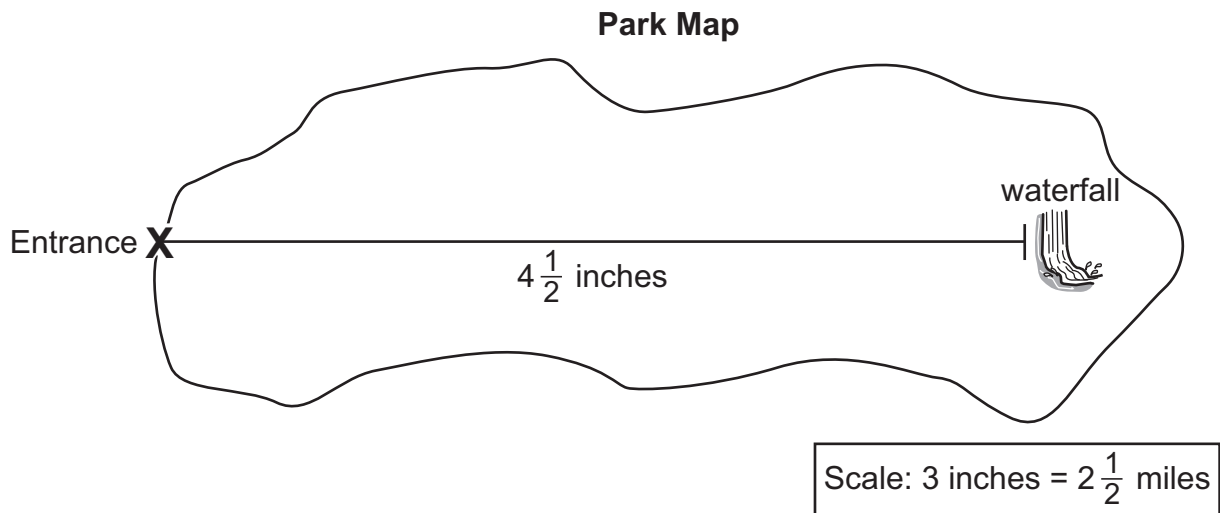
What is the actual distance from the entrance of the park to the waterfall?

A. 3.75 miles

B. 4 miles

C. 5 miles

D. 5.4 miles

34. Tanisha hit 40 golf shots and measured the distance of each shot. Her results are shown below.

Golf-Shot Distance

What is the experimental probability that Tanisha hits a shot that is in the 180–189 yard range?

A. $\dfrac{11}{40}$

B. $\dfrac{2}{5}$

C. $\dfrac{5}{8}$

D. $\dfrac{29}{40}$

35. Last year Jan had 25 model airplanes in her collection. This year she has 32% more model airplanes. Jan then gave her brother 6 model airplanes to start a collection. How many model airplanes does Jan have after she gave 6 to her brother?

A. 8

B. 27

C. 33

D. 51

Session 2—Math (Calculator)

36. Which unit rate is equivalent to $1\frac{3}{5}$?

   A. the unit rate, in miles per minute, of running $\frac{1}{8}$ of a mile in $\frac{3}{5}$ of a minute

   B. the unit rate, in pounds per day, of catching $\frac{4}{5}$ of a pound of fish in $\frac{1}{2}$ days

   C. the unit rate, in baskets per hour, of washing 1 basket of laundry in $\frac{3}{5}$ of an hour

   D. the unit rate, in trays per pound, of baking $\frac{5}{3}$ trays of cookies with $1\frac{3}{5}$ pounds of dough

37. A movie theater kept track of the attendance on Fridays and Saturdays. The results are shown in the box plots below.

Movie Theatre Attendance
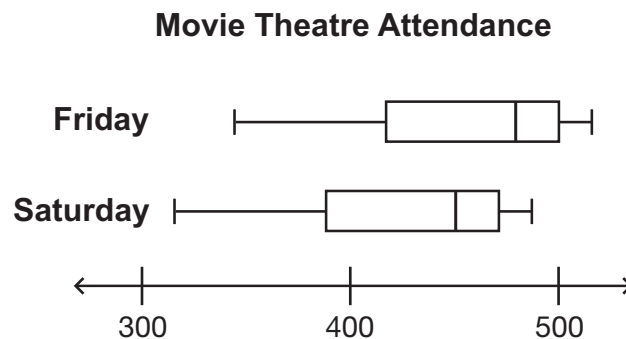
Which conclusion can be drawn from the box plots?

   A. The attendance on Friday and the attendance on Saturday have the same median and interquartile range.

   B. The attendance on Friday has a greater median and a greater interquartile range than attendance on Saturday.

   C. The attendance on Friday has a greater interquartile range than attendance on Saturday, but both data sets have the same median.

   D. The attendance on Friday has a greater median than attendance on Saturday, but both data sets have the same interquartile range.

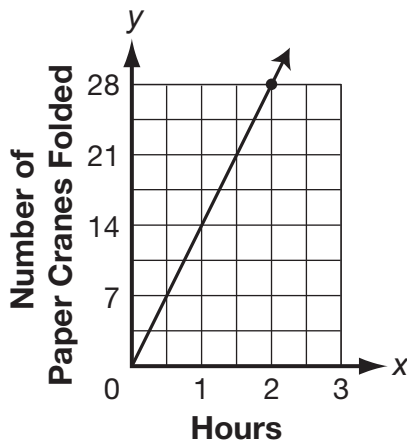**38.** Use the expression below to answer the question.

$$(2t - 8) - \frac{1}{2}(9 - 4t) + \frac{5}{2}$$

Which expression is equivalent to the one shown?
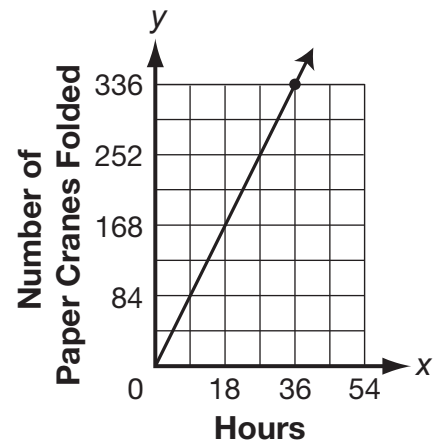
A. $-2t - 1$

B. $-2t - 10$

C. $4t - 1$

D. $4t - 10$

39. Victoria folded 56 paper cranes in 6 hours. Daimon folded paper cranes at the same rate as Victoria. Which graph could model the rate at which Daimon folded paper cranes?
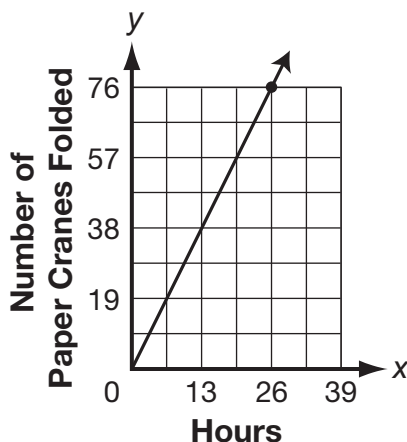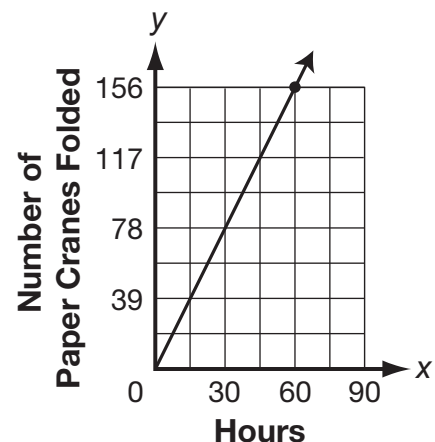
A.

Daimon's Paper Cranes

C.

Daimon's Paper Cranes

B.

Daimon's Paper Cranes

D.

Daimon's Paper Cranes

Session 2—Math (Calculator)

40. In Ms. Morales's class, the ratio of boys to girls is 3:7. The class sizes at Ms. Morales's school range from 22 to 34 students per class. What is the total number of students in Ms. Morales's class?

    A. 21 students

    B. 24 students

    C. 28 students

    D. 30 students

41. Samantha is painting the outside of a box that is in the shape of a rectangular prism. Its length is 18 centimeters, its width is 6 centimeters, and its height is 3 centimeters. What is the surface area of the box in square centimeters (cm^2)?

    A. 162 cm^2

    B. 180 cm^2

    C. 324 cm^2

    D. 360 cm^2

42. Sara is buying items at a store. Her total comes to $44.97. She uses all of the money that is still on a gift card to pay for part of the total. She pays the remaining $34.17 with cash. Which percentage **best** describes the part of the total that Sara paid for with the gift card?

    A. 1.32%

    B. 10.8%

    C. 24%

    D. 76%

43. Jeffrey typed 110 words in $2\frac{3}{4}$ minutes. At this rate, how many words can he type in $4\frac{1}{4}$ minutes?

    A. 71 words

    B. 165 words

    C. 170 words

    D. 255 words

Session 2—Math (Calculator)

44. Clarissa made 65% of her free throws during basketball games last season. Alexis made 58% of her free throws during basketball games last season. Clarissa and Alexis each attempted *f* free throws last season. The expression below can be used to find the percentage of free throws Clarissa and Alexis made together.

$$100 \left(\frac{0.65f \ + \ 0.58f}{2f} \right)$$

Which other expression could also be used to find the percentage of free throws both girls made last season?

A. $50(65f + 58f)$

B. $50f(0.65 + 0.58)$

C. $\dfrac{65+58}{2}$

D. $\dfrac{65+58}{200}$

45. Chris is trimming trees. He can trim $\dfrac{2}{3}$ of a tree in $\dfrac{1}{2}$ of an hour. At what rate can Chris trim trees?

A. $\dfrac{1}{6}$ of a tree per hour

B. $\dfrac{1}{3}$ of a tree per hour

C. $1\dfrac{1}{6}$ trees per hour

D. $1\dfrac{1}{3}$ trees per hour

Session 2—Math (Calculator)

46. At a restaurant, customers can order a hamburger, a cheeseburger, or a chicken sandwich as their main dish. With any of these main dishes they can order a side of french fries or a salad. The table below shows the orders placed by the last 50 customers.

Restaurant Orders

Main Dish	Side	Number of Orders
hamburger	french fries	17
	salad	4
cheeseburger	french fries	11
	salad	6
chicken	french fries	9
	salad	3

Based on the orders of the last 50 customers, which is the **best** estimate of the probability the next customer will order a salad with their main dish?

A. 13%

B. 25%

C. 33%

D. 50%

47. Phil used 3 gallons of paint to cover 1,125 square feet of a wall. At this same rate, what is the total area of the wall, in square feet, that Phil will cover using 5 gallons of paint?

A. 675 square feet

B. 1,575 square feet

C. 1,800 square feet

D. 1,875 square feet

Session 2—Math (Calculator)

48. Avery received $80 in cash for mowing lawns. She did the following with the $80.

- put 20% of the $80 into a bank account
- spent $\frac{1}{4}$ of the $80
- kept the rest of the $80 in cash

How much of the $80 did Avery keep as cash?

- **A.** $36
- **B.** $44
- **C.** $45
- **D.** $48

49. Tyler cut a $40\frac{1}{8}$-inch board into 3 pieces of equal length. He then cut $3\frac{3}{4}$ inches off of each piece to make smaller boards. What is the length of each of the smaller boards?

- **A.** $9\frac{5}{8}$ inches
- **B.** $10\frac{3}{8}$ inches
- **C.** $12\frac{1}{8}$ inches
- **D.** $33\frac{3}{8}$ inches

50. The circumference of the circular table on Colton's porch is 72π inches. What is the radius of the table?

- **A.** 18 inches
- **B.** 36 inches
- **C.** 72 inches
- **D.** 144 inches

51. Pablo recorded the colors of cars driving by his house. The table below shows the colors of the last 250 cars to drive by Pablo's house.

Cars Driving By

Color	Number of Cars
blue	70
green	30
red	50
white	80
yellow	20

Using the data, what is the probability that the next car to drive by Pablo's house will be red or blue?

A. $\dfrac{5}{25}$

B. $\dfrac{7}{25}$

C. $\dfrac{12}{25}$

D. $\dfrac{13}{25}$

52. Working together, Ann and Jane tiled a total of 480 square feet in 3 hours. They each tiled the same number of square feet. What is the average rate that Ann and Jane each tiled in square feet per hour?

A. 80 square feet per hour

B. 160 square feet per hour

C. 240 square feet per hour

D. 720 square feet per hour

Session 2—Math (Calculator)

53. Loren made 20 ounces of a snack mix that was $\frac{2}{5}$ peanuts, 25% raisins, and 4 ounces of chocolate chips. The rest was granola. How many ounces of granola were in Loren's snack mix?

    A.   3 ounces

    B.   5 ounces

    C.   6 ounces

    D. 15 ounces

54. Each week, a cook purchases 12 pounds of butter. During the last year, the cook has paid as little as $23.04 and as much as $29.40 for the butter purchased in a week. What is the difference between the greatest price per pound and the least price per pound of butter the cook has paid during the last year?

    A. $0.53

    B. $1.92

    C. $2.45

    D. $4.37

55. A baseball team will play 12 home games during the season. It has played 6 home games so far. Of the season's remaining games, $\frac{1}{3}$ will be played at home. The equation $\frac{1}{3}g + 6 = 12$ can be used to find the total number of games, g, remaining this season. How many games, g, remain in the season?

    A.   6 games

   **B.** 18 games

    C. 24 games

    D. 54 games

56. Andrea spent a total of $43.87 on new clothes at a clothing store. She bought

- 1 pair of sandals for $8
- 2 T-shirts for $9.49 each, and
- 1 pair of jeans.

The tax on the purchase was $2.87. How much did Andrea pay for the pair of jeans?

A. $14.02

B. $16.89

C. $23.51

D. $26.38

57. Matty's piano book includes 15 songs in the key of C, 10 in the key of G, and 5 in the key of F. The songs from all three keys appear in random order. Over the past month, Matty has randomly opened his piano book to a song in the key of C 80 times, the key of G 30 times, and the key of F 10 times. What are the theoretical and experimental probabilities that the next song Matty randomly picks will be in the key of G?

A. Theoretical probability = $\dfrac{1}{4}$ and experimental probability = $\dfrac{1}{3}$

B. Theoretical probability = $\dfrac{1}{2}$ and experimental probability = $\dfrac{1}{3}$

C. Theoretical probability = $\dfrac{1}{3}$ and experimental probability = $\dfrac{1}{2}$

D. Theoretical probability = $\dfrac{1}{3}$ and experimental probability = $\dfrac{1}{4}$
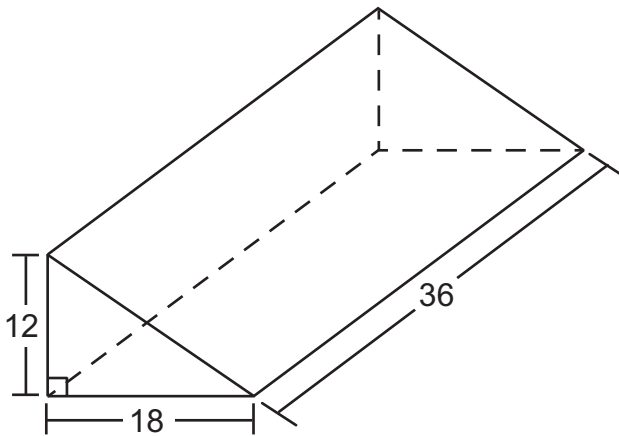
58. Use the diagram below to answer the question.
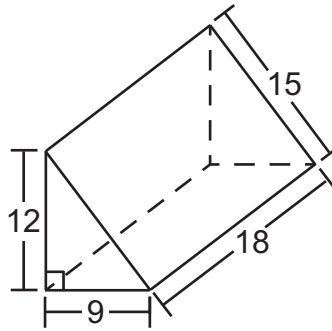
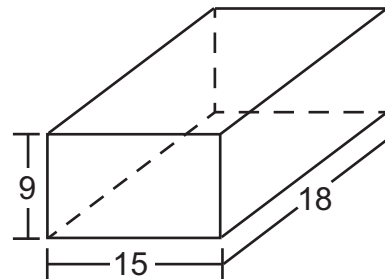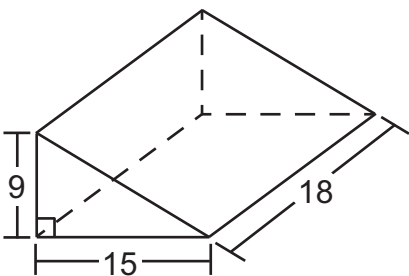Which solid figure has exactly twice the volume, in cubic units, as the solid figure shown above?
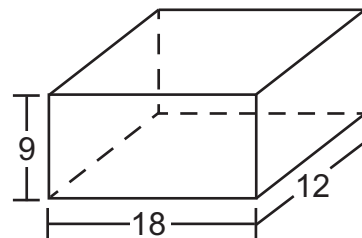
A.

C.

B.

D.

59. A publishing company is going to have 24,000 books printed. There are between 3 and 4 books out of every 3,000 printed that will have a printing error. At this rate, which number could be the exact number of books that will have a printing error?

    A.   7

    B. 12

    C. 31

    D. 36

60. Amy knits $\frac{1}{10}$ of a scarf in $\frac{4}{5}$ of an hour. What fraction of a scarf can Amy knit in 1 hour?

    A. $\frac{1}{5}$ of a scarf

    B. $\frac{1}{8}$ of a scarf

    C. $\frac{9}{10}$ of a scarf

    D. $\frac{2}{25}$ of a scarf

STOP

Session 3—Math (Calculator)

Write your answers for questions 61 and 62 in the spaces provided below. 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 review your work in this session, but do not work on any other session.

You MAY use a calculator for this session.

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61. A. Look at each set of measures in the chart below. Determine whether each set of measures does not create a triangle, creates a unique triangle, or creates more than one triangle. Fill in the chart by putting an X in each appropriate column next to each set of measures. The first row in the chart has been completed for you.

Triangle Measures

Measures	Not a Triangle	Unique Triangle	More Than One Triangle
11 in., 11 in., 60°		X	
25°, 50°, 25°			
5 ft, 6 ft, 10 ft			
68°, 109°, 3°			
13 cm, 7 cm, 6 cm			
8 mm, 2 mm, 90°			

B. Explain why the measures 11 in., 11 in., 60° create a unique triangle.

C. One of the measures in the triangle described by the measures 11 in., 11 in., 60° is changed. The new measures do **not** create a triangle. What could be the new measures?

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62. In a school with only sixth and seventh graders, $\frac{2}{5}$ of the 200 students are seventh graders.

A. How many students in the school are seventh graders?

B. Describe two different ways to determine how many students in the school are sixth graders.

C. Of the seventh graders, 30% are in the band. If the band has the same number of sixth graders as seventh graders, what percentage of the sixth graders are in the band? Explain how you found your answer.

STOP

Multiple-Choice Answer Key

Name: _____

Session 1

1.	**C**	16.	**A**
2.	**C**	17.	**C**
3.	**D**	18.	**C**
4.	**C**	19.	**B**
5.	**D**	20.	**B**
6.	**D**	21.	**A**
7.	**B**	22.	**B**
8.	**B**	23.	**D**
9.	**C**	24.	**C**
10.	**A**	25.	**C**
11.	**D**	26.	**D**
12.	**A**	27.	**D**
13.	**D**	28.	**D**
14.	**C**	29.	**C**
15.	**A**	30.	**D**

Multiple-Choice Answer Key

Name: _____

 Session 2

31.	**B**		46.	**B**
32.	**A**		47.	**D**
33.	**A**		48.	**B**
34.	**A**		49.	**A**
35.	**B**		50.	**B**
36.	**B**		51.	**C**
37.	**D**		52.	**A**
38.	**D**		53.	**A**
39.	**C**		54.	**A**
40.	**D**		55.	**B**
41.	**D**		56.	**A**
42.	**C**		57.	**D**
43.	**C**		58.	**D**
44.	**C**		59.	**C**
45.	**D**		60.	**B**