

6th Grade and 6th Grade Accelerated Math Summer Packet

Dear Students, Parents and Guardians,

Welcome to Bak Middle School of the Arts Mathematics!

Enclosed you will find a math packet to be **completed this summer**. These skills are all **prerequisite skills** for 6th grade math, meaning that they were taught in elementary school. It is expected that students will be proficient at all of these skills. They will be assessed during the first few weeks of school.

No Calculators! Show all appropriate work and circle your answers.
The packet will be collected within the first few weeks of school.
This assignment will be a portion of your first marking period homework grade.

In addition, it is imperative that all middle school students **master their multiplication facts**. Quick recall of all the facts from 0-12 will allow students to complete tasks in math quickly and with greater accuracy.

Mastery of multiplication facts is accomplished through memorization and frequent practice. The ideal experience is to practice with flashcards which can be purchased at the dollar store or made by hand. Parents practicing with students is highly recommended!

Besides traditional flashcards, below you will find a list of some available resources to assist in mastery of multiplication facts:

Websites:

- www.multiplication.com
- https://www.mathplayground.com/index_multiplication_division.html
- <https://fun4thebrain.com/mult.html>

Apps (Free):

- Math Speed Drill
- Math In A Flash
- Multiplication Flash Cards
- Times Tables
- Times Tables Quiz!
- Multiplication Math Games Math
- Math Champions Lite

On the next page you will find a 5 minute multiplication drill. If your child is not able to successfully answer the multiplication facts in the 5 minute window, please use the above resources.

Please ensure all multiplication facts (0-12)
are memorized by the first day of school.

Name _____ Date _____

Complete each problem. Show your work or explain your thinking.

1. The number is: **513.73**

How does the value of the digit **7** change if it is moved to the left two times?

- A. The value increases by a factor of **10**.
- B. The value increases by a factor of **100**.
- C. The value decreases by a factor of **1/10**.
- D. The value decreases by a factor of **1/100**.

2. There are **151** third-grade students and **140** fourth-grade students going to the Museum of Science. Each bus can hold **44** students. How many buses would be required to accommodate all the students on the trip?

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

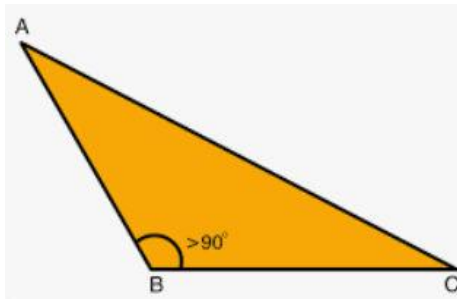
3. Please convert the following:

4 gallons = _____ cups

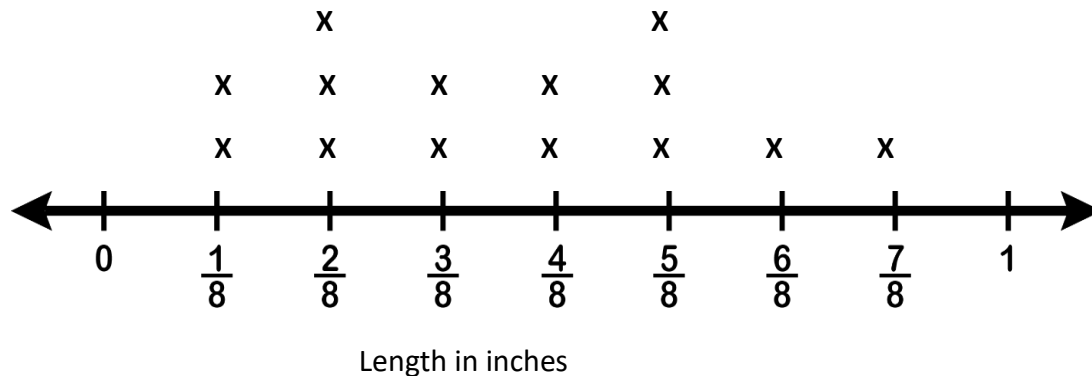
- A. 32
- B. 16
- C. 48
- D. 64

4. A triangle is shown below. Select the proper term to describe the triangle.

- A. Obtuse
- B. Equilateral
- C. Right
- D. Isosceles



5. Justin created a line plot based on measurements he took of insects.



After completing the line plot, Justin realized he forgot to include 2 measurements $\frac{3}{8}$ and $\frac{5}{8}$. Update the line plot above by adding these values.

6. Which mixed number below represents $18/4$?

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

7. The number six hundred thirteen and eighty three hundredths in standard form is:

- A. 683.13
- B. 316.83
- C. 618.113
- D. 613.83

8. A candy store orders 15 cases of milk chocolate bars, each containing 24 bars. The same store also ordered 14 cases of white chocolate bars, each containing 12 bars. How many more milk chocolate bars did the store order?

- A. 192
- B. 360
- C. 168
- D. 291

9. Samantha is measuring fabric for the curtains in our living room. She needs 15.5 meters of fabric. She has 680 centimeters of fabric. How many more meters of fabric does she need?

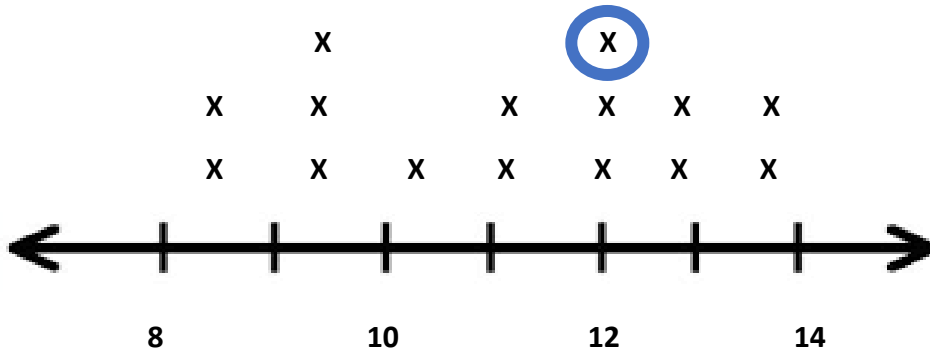
- A. 8.7
- B. 7.8
- C. 12.4
- D. 14.2

10. Looking at the shape below, please select the TWO terms that describes the shape:



- A. Rhombus
- B. Rectangle
- C. Quadrilateral
- D. Pentagon
- E. Parallelogram

11. Looking at the line plot below, select the value of the X that is circled.



- A. 8
- B. 10
- C. 12
- D. 14

12. Choose the division expression that represents the word problem below.

Blake had a 12-inch log cake that he cut into 6 equal pieces.

- A. 12×6
- B. $12 - 6$
- C. $6 + 12$
- D. $12 \div 6$

13. A number is described as fifty-two tens, fifteen tenths, and six hundredths. Which number below represents what is being described?

- A. 521.56
- B. 502.56
- C. 151.06
- D. 525.16

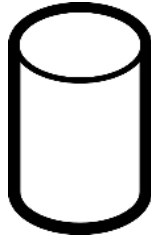
14. Elliott had a canister with 14 cups of flour. He used $2\frac{1}{2}$ cups of flour to make pizza dough. He used another $3\frac{1}{4}$ cups of flour for calzones. How many cups of flour were left over?

- A. $6\frac{3}{4}$
- B. $8\frac{1}{4}$
- C. 9
- D. $6\frac{1}{4}$

15. My Alfredo recipe requires 48 ounces of cream. I only have a one-half cup measuring cup. How many measuring cups of cream will I need for the Alfredo recipe?

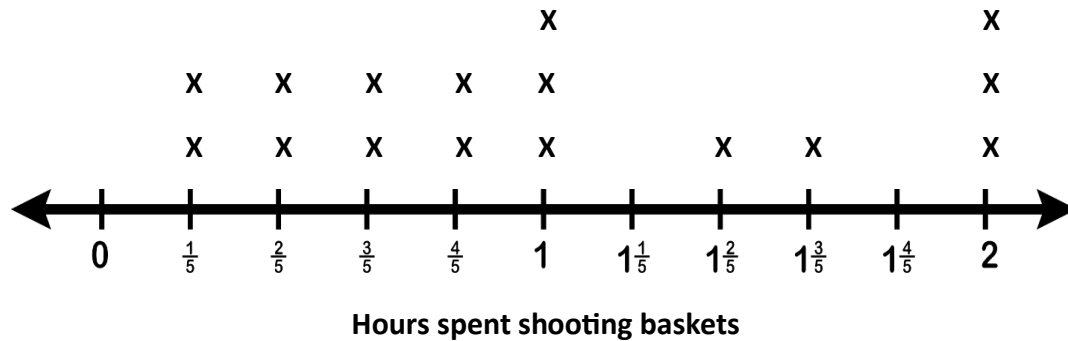
- A. 3
- B. 4
- C. 6
- D. 12

16. Please choose the correct identity of the shape below.



- A. Prism
- B. Sphere
- C. Pyramid
- D. Cylinder

17. Mr. Brown recorded the number of hours each of his students spent shooting baskets at practice.



How many students does Mr. Brown have? How many hours was spent shooting baskets?

- A. 15 Students, 15 hours
- B. 16 Students, 15 hours
- C. 15 Students, 16 hours
- D. 16 Students, 16 hours

18. Find the product of the two mixed fractions below:

$$2\frac{5}{8} \times 6\frac{3}{4} =$$

- A. $\frac{567}{32}$
- B. $\frac{21}{32}$
- C. $\frac{15}{16}$
- D. $\frac{576}{32}$

19. Round each original number to the nearest whole, tenth, and hundredth.

ORIGINAL	NEAREST WHOLE	NEAREST TENTH	NEAREST HUNDREDTH
1.649			

- A. Whole = 1 Tenth = 1.6 Hundredth = 1.64
- B. Whole = 2 Tenth = 1.6 Hundredth = 1.64
- C. Whole = 1 Tenth = 1.6 Hundredth = 1.65
- D. Whole = 2 Tenth = 1.6 Hundredth = 1.65

20. Justin has a gallon of freshly made eggnog. He wants to share his eggnog with SIX friends. What fraction of a gallon of eggnog will each friend get?

- A. $\frac{4}{6}$ of a gallon
- B. $\frac{1}{6}$ of a gallon
- C. $\frac{3}{6}$ of a gallon
- D. $\frac{6}{6}$ of a gallon

21. Please complete the following conversions:

192 hours = _____ days

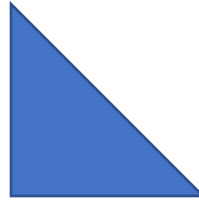
7 gallons = _____ quarts

4 hours = _____ seconds

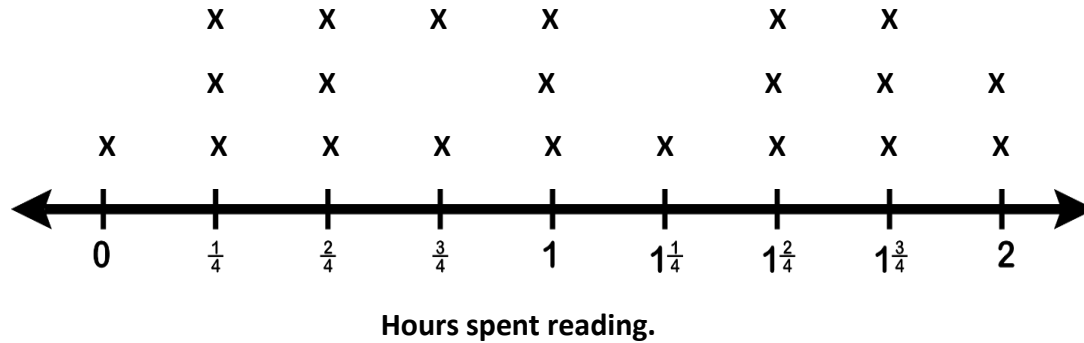
- A. 7 days, 24 quarts, 10, 800 seconds
- B. 9 days, 24 quarts, 14,400 seconds
- C. 8 days, 28 quarts, 14,400 seconds
- D. 9 days, 28 quarts, 10,800 seconds

22. Looking at the triangle below, please select TWO terms that describe the triangle.

- A. Isosceles
- B. Scalene
- C. Right
- D. Equilateral
- E. Acute
- F. Obtuse



23. Mr. Gibson records the number of hours each of his students spent reading in the line plot below:



How many students read exactly $1\frac{1}{4}$ hours?

- A. 1 Student
- B. 3 Students
- C. 9 Students
- D. 12 Students

24. Which of the following expressions will have a product greater than FOUR?

- A. $\frac{1}{2} \times 4$
- B. $\frac{3}{4} \times 4$
- C. $\frac{5}{4} \times 4$
- D. $\frac{1}{8} \times 4$

25. Which answer correctly adds the following numbers?

$91.347 + 4.21 =$

- A. 95.557
- B. 133.447
- C. 91.768
- D. 91.3891

26. Please change the expression that is written in word form below, into numerical form.

Four and seven-tenths times the sum of four and five.

A. $4 \times \frac{7}{10} - 9$

B. $4 \times 5 + \frac{7}{10}$

C. $4 \frac{7}{10} \times (4+5)$

D. $9 \frac{7}{10} + (4 \times 5)$

27. During my first month at work, I was earning \$12.50 per hour. Starting last week, I received a fifteen-cent per hour raise. I worked 17 hours last week. How much money did I earn last week?

A. \$215.05

B. \$212.50

C. \$212.65

D. \$214.65

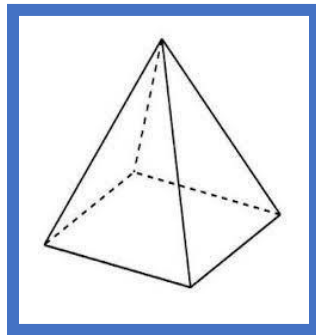
28. Please choose the correct answer to this shape's identity.

A. Prism

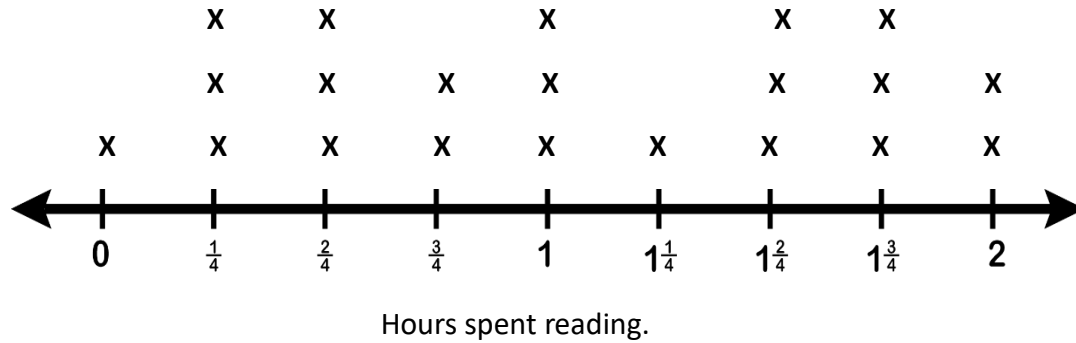
B. Cylinder

C. Sphere

D. Pyramid



29. Mr. Gibson recorded the number of hours each of his students spent reading in the line plot below:



How many students read for at least $1\frac{1}{4}$ hours?

- A. 1
- B. 9
- C. 12
- D. 13

30. There are $7\frac{2}{3}$ miles from my school to my house. The school bus has driven $\frac{3}{4}$ of the way. How many miles have I already traveled?

- A. $4\frac{3}{4}$ miles
- B. $5\frac{1}{2}$ miles
- C. $4\frac{1}{2}$ miles
- D. $5\frac{3}{4}$ miles

31. Our missions' group needs to send food boxes weighing 14,754 pounds across the country. The carrier we are using has 3 trucks. If they want to distribute the cargo evenly between the three trucks, how much weight will be on each truck?

- A. 1894 lbs.
- B. 4918 lbs.
- C. 8149 lbs.
- D. 4198 lbs.

32. After Thanksgiving, there was $\frac{3}{8}$ of an apple pie left in the refrigerator. My sister Shirley ate $\frac{1}{3}$ of the remaining pie. What fraction of the pie was left?

- A. $\frac{5}{8}$
- B. $\frac{1}{4}$
- C. $\frac{1}{16}$
- D. $\frac{2}{16}$

33. Jake has been earning \$125.00 each time he details a car for someone. He has already detailed a car 6 times this summer. He is saving for a new set of tires for his car that costs \$988.00. How many more times must he detail a car before he has enough money to buy the new tires?

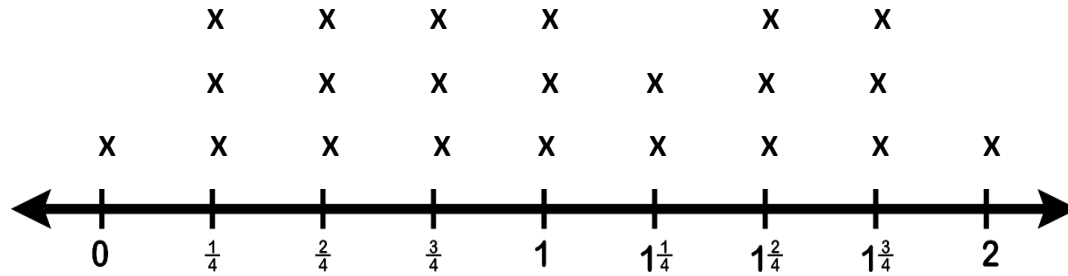
- A. 5
- B. 4
- C. 3
- D. 2

34. Please choose the correct perimeter of the figure below:

- A. 60mm
- B. 70 mm
- C. 80mm
- D. 90mm



35. Mr. Gibson recorded the number of hours each of his students spent reading in the line plot below:



Hours spent reading.

How many students read for at least $1\frac{3}{4}$ of an hour?

- A. 4 Students B. 5 Students C. 6 Students D. 11 Students

36. My sister has $\frac{1}{2}$ of a pizza leftover from her birthday party. She wants to share it equally between 2 of her friends. What fraction of a whole pizza will each friend receive?

- A. $\frac{1}{3}$
B. $\frac{1}{4}$
C. $\frac{1}{5}$
D. $\frac{1}{6}$

37. My drone company earns \$499.00 for each real estate job we take photos for. We had 28 jobs this month. How much money did my drone company earn for the month?

- A. \$17,921
B. \$13,972
C. \$19,372
D. \$12,397

38. Looking at the expression below, what is the first step in solving the problem according to the order of operations?

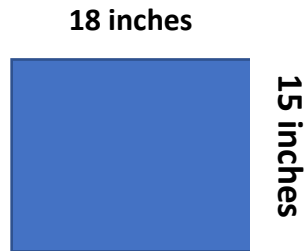
$$7.1 \times 5 - (6 \div 3 + 9.8)$$

- A. $6 \div 3$
- B. 7.1×5
- C. 9.8
- D. $3 + 9.8$

39. Justin is saving his money to buy a new camera for his drone that costs \$199.99. He has \$87.59 in his savings account. He just painted a drone for a friend and received \$50.00 for the paint job. He also has a jar with 48 quarters in it. How much more money does he need to buy the new camera?

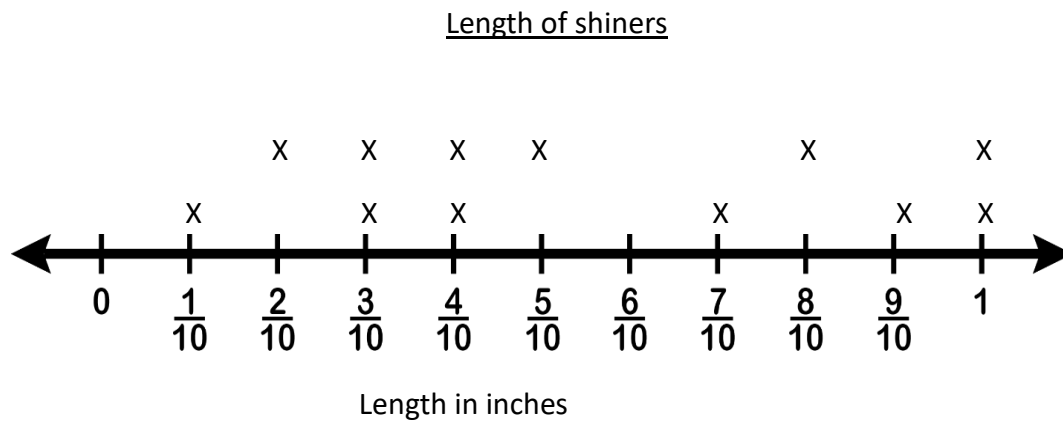
- A. \$40.50
- B. \$12.00
- C. \$50.40
- D. \$21.00

40. Looking at the figure below, please choose the answer that shows the correct area of the figure.



- A. 640 sq. inches
- B. 406 sq. inches
- C. 270 sq. inches
- D. 207 sq. inches

41. Emily recorded the measurements of several shiners (live bait fish) in the line plot below. She forgot to include three shiners that were a half-inch long each. How would she correctly update the line plot to show the three missing shiners?



- A. Stack three X's above the $\frac{5}{10}$ on the line plot.
- B. Stack three X's above the $\frac{4}{10}$ on the line plot.
- C. Stack three X's above the $\frac{3}{10}$ on the line plot.
- D. Stack three X's above the $\frac{2}{10}$ on the line plot.

42. Which two of the following expressions will have a product less than 26?

- A. $\frac{1}{2} \times 32$
- B. $\frac{3}{5} \times 32$
- C. $\frac{11}{5} \times 32$
- D. $\frac{11}{2} \times 32$

43. Looking at the four steps in solving the numerical expression below, which step is wrong?

$$\frac{1}{4} \times (42 \div 3 + 6) + 4$$

- A. Step 1: $\frac{1}{4} \times (14 + 6) + 4$
- B. Step 2: $\frac{1}{4} \times 20 + 4$
- C. Step 3: $\frac{1}{4} + 4$
- D. Step 4: 9

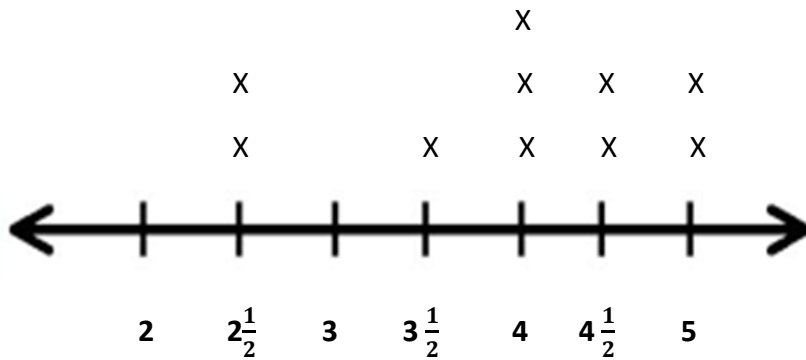
44. Molly earned \$5,600 in July. She put one-fourth of the money she earned in a savings account. She spent \$170 on groceries, \$88.75 on her cell phone service, and \$32.00 at the Dollar Store. She also made a truck payment of \$359.25. How much did Molly have remaining of her July earnings?

- A. \$4,950.25
- B. \$3,550.00
- C. \$5430.00
- D. \$3550.25

45. If I had a square with a side length of 4.4 inches, what would the perimeter of the square be? What are the total square inches?

- A. Perimeter = 17.6 inches, 19.36 sq. inches
- B. Perimeter = 16.6 inches, 13.93 sq. inches
- C. Perimeter = 17.3 inches, 19.33 sq. inches
- D. Perimeter = 17.6 inches, 29.36 sq. inches

46. Jim Locker recorded the hours of sleep he got each night for the last 10 days.



Number of hours slept.

How many nights did Jim receive at least 4 hours of sleep?

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

47. How many fifths are in 12 wholes?

- A. 40
- B. 50
- C. 60
- D. 70

48. The quotient of 68 and 0.4 will be:

- A. Less than 90
- B. Between 90 and 120
- C. Between 120 and 150
- D. Above 150

49. Which two statements below are false?

- A. $15.5 + 1 = 3.3 \times 5$
- B. $7.7 - 0.5 = 2.4 \times 3$
- C. $10.6 - 4.1 = 1.97 \times 3.2$
- D. $14.2 - 5.4 = 2.23 \times 4.5$

50. Please choose the correct answer:

42 quarts equals how many cups?

- A. 164 Cups
- B. 146 Cups
- C. 168 Cups
- D. 186 Cups

51. Write 9,677 in its expanded form.

- A. $900 + 600 + 70 + 7$
- B. $9700 + 600 + 77 + 7$
- C. $9000 + 600 + 70 + 7$
- D. $9600 + 100 + 70 + 7$

52. Which of the following are correct? Select FOUR.

- A. $8.97 > 8.798$
- B. $148.567 > 148.787$
- C. $29.92 < 29.988$
- D. $5.56 > 5.467$
- E. $290.998 < 289.999$
- F. $28.76 > 28.723$

53. $312.694 \div 0.1 =$

- A. 312,694.00
- B. 31,269
- C. 3,126.94
- D. 394.00

54. Which is true of the product of 30×1.05 ?

- A. It is less than 30.
- B. It is greater than 30, but less than 31.
- C. It is greater than 31, but less than 32.
- D. It is equal to 32.

55. Juan has a piece of cardboard that is 5 feet long. He cuts the cardboard into 16 equal pieces to make packing material. How long is each piece of cardboard? Which express the answer as a fraction or mixed number?

A. $\frac{5}{16}$ foot

B. $\frac{5}{16}$ feet

C. $\frac{16}{8}$ foot

D. $\frac{16}{8}$ feet

56. Tanya has 68 cans of soda left over from her holiday party. She wants to give the same number of sodas to each of four friends, and to keep 8 sodas for herself. Write an equation that will show the greatest number of sodas each friend will receive. Write the equation and solve.

- A. $68 = 4c + 8$; $c = 18$
- B. $68 = 4c + 8$; $c = 15$
- C. $68 = 8c + 4$; $c = 8$
- D. $68 = 8c + 4$; $c = 12$

57. Which rule is shown by the pattern?

10, 30, 90, 270, 810

- A. Add 20
- B. Subtract 20
- C. Divide by 3
- D. Multiply by 3

58. Which correctly completes the table for the expression, $8 + 2x$?

Input (X)	0	1	2	3
Output				

A.

Input (X)	0	1	2	3
Output	6	8	10	12

B.

Input (X)	0	1	2	3
Output	12	10	8	6

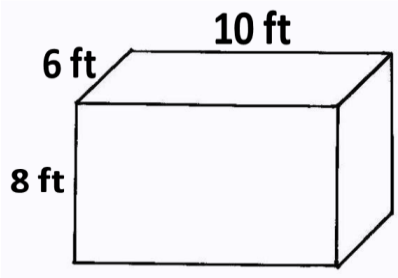
C.

Input (X)	0	1	2	3
Output	8	10	12	14

D.

Input (X)	0	1	2	3
Output	14	12	10	8

59. What is the volume?

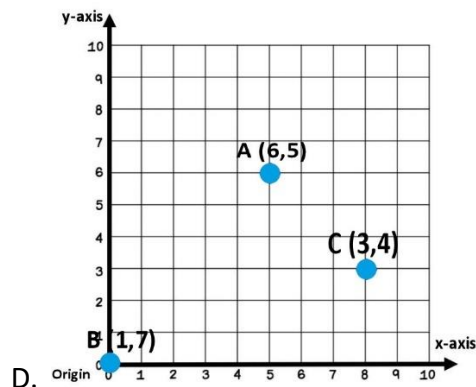
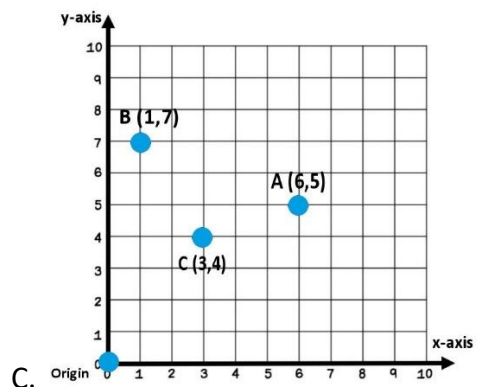
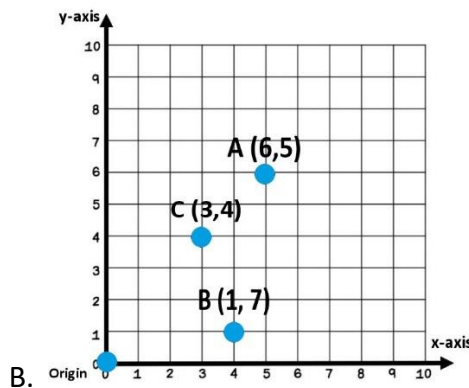
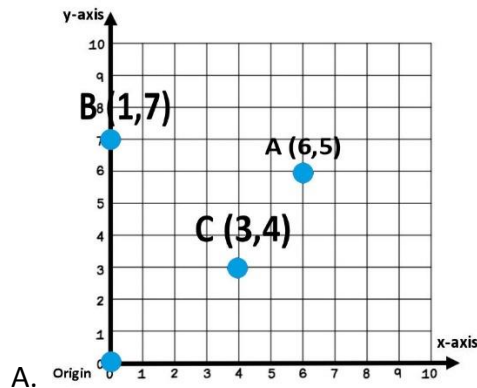


- A. 490 cubic ft
- B. 480 cubic ft
- C. 680 cubic ft
- D. 690 cubic ft

60. Jenna has a jewelry box that is 9 inches wide, 7 inches tall, and 18 inches long. What is the volume, in cubic inches, of the jewelry box?

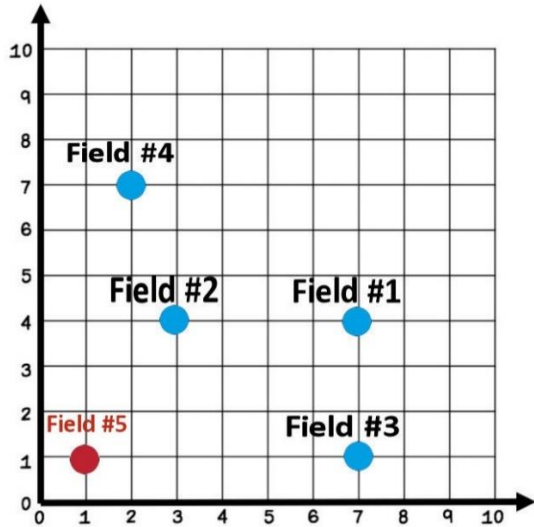
- A. 1,134 cubic inches
- B. 34 cubic inches
- C. 126 cubic inches
- D. 2,268 cubic inches

61. Which coordinate plane correctly plots the points A (6,5), B (1,7) and C (3,4)?

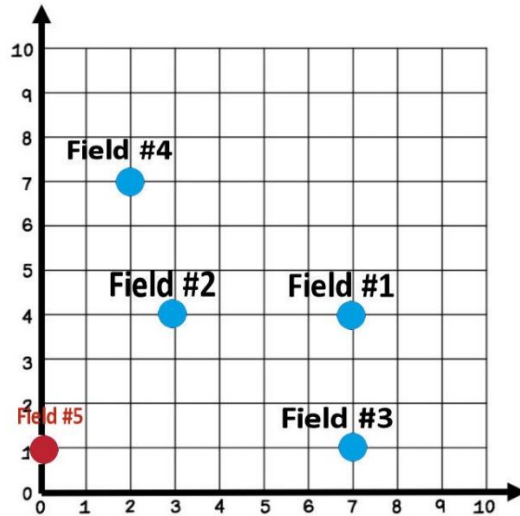


62. Bob is creating a map of the soccer fields in his town on a coordinate plane. Which coordinate plane correctly identifies Field #5?

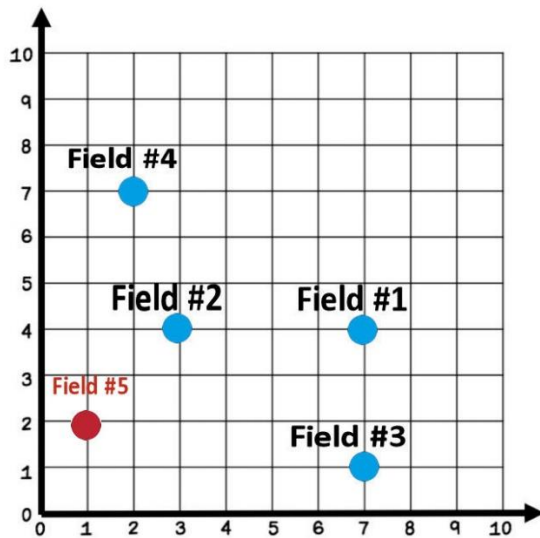
Field #1 is exactly 4 blocks from Field #2. Field #5 is exactly 6 blocks to the left and 1 block down from Field #3 on the map. What coordinate pair represents Field #5?



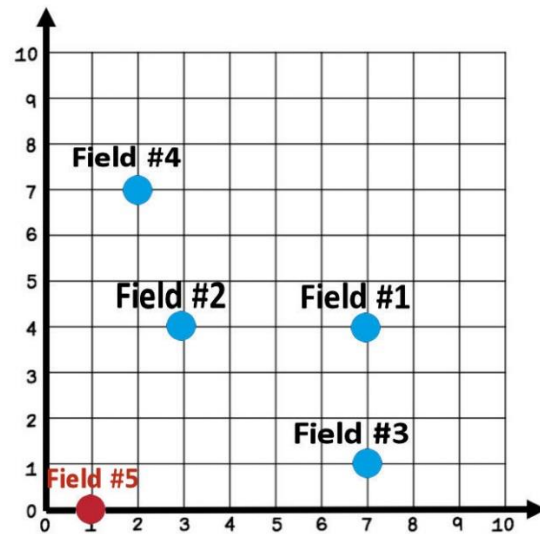
A.



B.



C.



D.