Name:_____ Class:_____ Date:_____

Incoming 6th Grade Summer Work
MS 181 Pablo Casals

Dear Future 6th Graders,

The math work that you will find in this packet must be completed over the summer to help you succeed as a 6th grade math student.

Please do not leave all of the work to be completed until the very end of the summer.

Complete some problems each week in order to avoid hours worth of math work at the end of the summer.

Please make sure to show all of your work for solving problems. Work will be graded.

Please provide the following information:

Elementary school: _____

We hope you have a wonderful summer! We are so excited to have you in the 6th grade!

Sincerely,
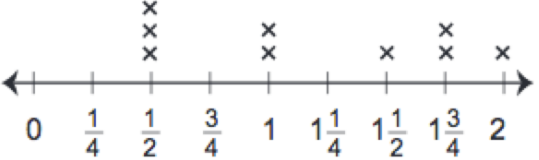Mr. Warnock
Principal

Ms. Madden, Ms. Neill & All of the 6th Grade Math Teachers
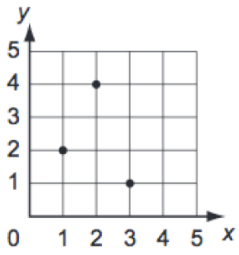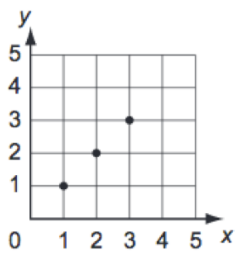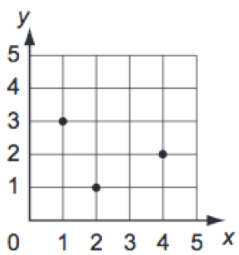*Assistant Principal   Math Coach*

Name:_____ Class:_____ Date:_____

Directions:
- ☐ Read each problem carefully
- ☐ Show all work in the space provided
    - ☐ Showing work is part of your grade, please make sure that it is there! If you are using a calculator, write down the equation that you punched into your calculator in the "Show your work" box.
- ☐ Identify your final answer by circling the correct choice and writing it on the line next to t

Question	Show your work
_____1. Which equation demonstrates the commutative property of multiplication? a. x = 1 b. (6f)3 = 3(6f) c. 3(4m x 5) = 12m x 15 d. 12(2n) = (12n)2 *6.EE.A.3*	
_____2. The average daily temperatures in July of some cities in Texas are shown in the table. Which of the following lists the cities from greatest temperature to least temperature? <table><tr><th>City</th><th>Average Daily Temperature</th></tr><tr><td>Austin</td><td>84.52°F</td></tr><tr><td>Dallas</td><td>85.9°F</td></tr><tr><td>San Antonio</td><td>85°F</td></tr><tr><td>Fort Worth</td><td>85.31°F</td></tr></table> a. Dallas, Fort Worth, San Antonio, Austin b. Austin, Dallas, San Antonio, Fort Worth c. Austin, San Antonio, Fort Worth, Dallas d. Dallas, San Antonio, Fort Worth, Austin *5.NBT.3*	
_____3. A gas station sold 300.5849 gallons of gas in a day. How many gallons of gas did the gas station sell, rounded to the nearest hundredth? a. 300 b. 300.58 c. 300.585 d. 300.59 *5.NBT.4*	

Question	Show your work
_____4. There are 2,817 homes in the town of West Valley. Each home uses an average of 380 gallons of water each day. Use the expression below to find the total number of gallons of water the homes in West Valley use on average each day. 2,817 × 380 What is the total number of gallons of water the homes in West Valley use on average each day? a. 860,460 gallons b. 870,460 gallons c. 1,060,460 gallons d. 1,070,460 gallons *5.NBT.5*	
_____5. David and his friends kept track of how much their height increased, in inches, over the past year. The line plot below shows this information **Height Increase (inches)** Based on the line plot, the most students grew how many inches this year? a. 0 inches b. 1 inch c. $\frac{1}{2}$ inch d. 2 inches *5.MD.1*	
_____6. Greg had $240.00 to spend on new clothes. He spent $43.85 on two shirts, $84.98 on a pair of shoes and $56.24 on a pair of pants. About how much money did he spend? a. $200.00 b. $185.00 c. $175.00 d. $170.00 *5.NBT.7*	

Question	Show your work
_____7. Which coordinate grid shows the points (1, 2), (2, 4), and (3, 1) graphed correctly?	

7. Which coordinate grid shows the points (1, 2), (2, 4), and (3, 1) graphed correctly?

A.

B.

C.

D.

6.NS.8

_____8. If 3 cars hold 15 people, how many cars are needed for 165 people?

    a. 11 cars   b. 33 cars

    c. 55 cars   d. 180 cars

4.MD.2

_____9. Which expression is **not** equivalent to $\frac{2}{3}$ x 4?

    a. (2 x 4) $\div$ 3   b. $\frac{1}{3}$ x (2 x 4)

    c. (4 x $\frac{1}{3}$) x 2   d. (2 x $\frac{1}{3}$) + (4 x $\frac{1}{3}$)

5.NF.4

_____10. A box contains 512 grams of cereal. One serving of cereal is 56 grams. How many servings of cereal does the box contain?

    a. $9\frac{1}{4}$ b. $9\frac{1}{8}$

    c. $9\frac{8}{56}$ d. $9\frac{8}{512}$

5.NF.3

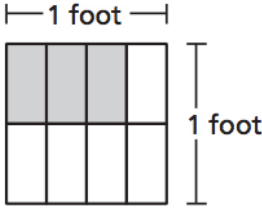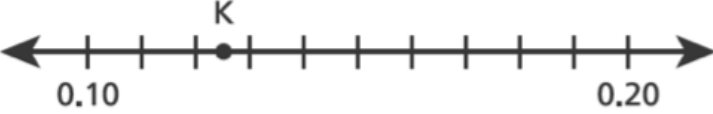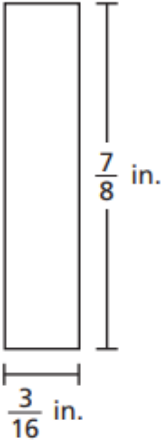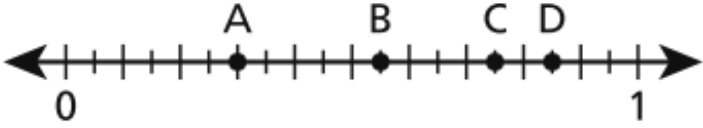| Question	Show your work
_____11. Kamilah took $7.75 to her school book fair. She bought 3 posters and 1 book. The prices, including tax, for items sold at the book fair are shown. **Book Fair** | Item	Price
stickers	$0.25
pencil	$0.35
poster	$1.05
gel pen	$1.60
book	$3.00 | What is the <u>greatest</u> number of pencils Kamiah can buy with the money she has left? a. 5 pencils b. 4 pencils c. 2 pencils d. 1 pencil *4.MD.2*	
_____12. Which number sentence is true? a. 0.35 > 0.36 b. 0.3 < 0.04 c. 0.3 > 0.20 d. 0.75 < 0.7 *4.NF.3*	
_____13. Mr. Hinckley owns 83 acres of land. He divides the land into eight equal sections to sell to eight buyers. Which phrase describes how much land, in acres, each buyer will receive? a. more than 9 and less than 10 b. more than 10 and less than 11 c. more than 11 and less than 12 d. more than 12 and less than 13 *5.NF.3*	
_____14. Which expression is equivalent to $\frac{3}{5}$? a. 3 x 5 b. 3 + 5 c. 3 ÷ 5 d. 3 - 5 *5.NF.3*	
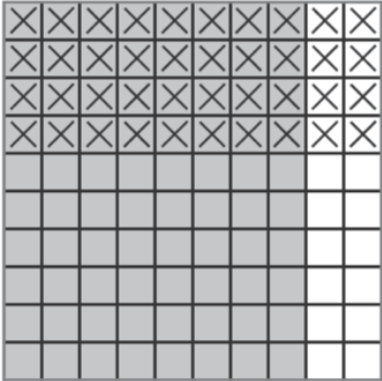
Question	Show your work
_____15. The shaded part of the square below has a length of $\frac{3}{4}$ foot ad a width of $\frac{1}{2}$ foot. ⊢—1 foot —⊣ [shaded square diagram] 1 foot What is the area, in square feet, of the shaded part of the square? a. $\frac{1}{8}$ b. $\frac{3}{8}$ c. $\frac{4}{8}$ d. $\frac{5}{8}$ *5.NF.4*	
_____16. Maggie had a bag of peanuts that weighed 2.84 pounds. She took some of the peanuts out of the bag. The bag then weighed 1.24 pounds. What was the weight of the peanuts that Maggie took out of the bag? a. 4.08 pounds b. 3.60 pounds c. 1.60 pounds d. 1.06 pounds *5.NBT.7*	
_____17. Millie designed a rectangular label to put on the front of her scrapbook. The label was $\frac{5}{12}$ foot wide and $\frac{5}{6}$ foot long. What was the area, in square feet, of the label? a. $2\frac{6}{12}$ b. $1\frac{3}{12}$ c. $\frac{10}{18}$ d. $\frac{25}{72}$ *5.NF.4*	

Question	Show your work
_____18. Bettina spent \$75 on 5 shirts that each cost the same price. Three of the shirts were red. Which expression represents the total cost of the red shirts? a. $75 \times \frac{3}{5}$ b. $75 \times \frac{5}{3}$ c. $\frac{75}{5} \times \frac{1}{3}$ d. $\frac{75}{3} \times \frac{1}{5}$ *5.NF.4*	
_____19. For which values of k would the product of $\frac{k}{3} \times 12$ be greater than 12? a. For any value of k less than 1 but greater than 0 b. For any value of k less than 3 but greater than 1 c. For any value of k equal to 3 d. For any value of k greater than 3 *5.NF.5*	
_____20. What decimal number is equivalent to $\frac{73}{100}$? a. 0.73 b. 7.30 c. 73.100 d. 100.73 *4.NF.6*	
_____21. Four hundred sixty-nine and eight hundredths can also be written as: a. 460.908 b. 460.98 c. 469.08 d. 469.800 *5.NBT.3*	
_____22. Which expression is equivalent to $4 + [4 \times (5 - 2)] \div 2$? a. $4 + 12 \div 2$ b. $4 + 18 \div 2$ c. $8 \times 3 \div 2$ d. $8 \times 5 - 1$ *5.OA.1*	

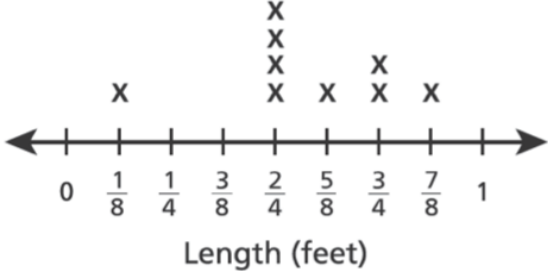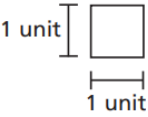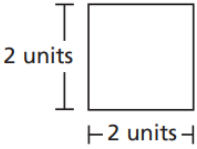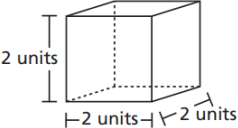| Question	Show your work
_____23. Point K is shown on the number line below. K 0.10 0.20 Which number sentence best describes the value represented by point K? a. K > 0.13 b. K < 0.13 c. K = 0.15 d. K = 0.35 *5.NBT.3*	
_____24. What is the area, in square inches, of a rectangle with the dimensions shown in the diagram below? $\frac{7}{8}$ in. $\frac{3}{16}$ in. a. $\frac{21}{128}$ b. $\frac{3}{14}$ c. $\frac{10}{24}$ d. $\frac{24}{112}$ *5.NF.4*	
_____25. Which comparison is true? a. 2.919 > 2.94 b. 0.99 < 0.569 c. 1.27 > 1.189 d. 3.861 < 3.75 *5.NBT.3*	
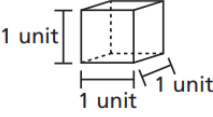
Question	Show your work

_____26. Which expression has a value greater than $\frac{1}{2}$?
 	
   a. $\frac{1}{2} \times \frac{4}{5}$ b. $\frac{1}{2} \times \frac{4}{4}$
 	
   c. $\frac{1}{2} \times \frac{5}{5}$ d. $\frac{1}{2} \times \frac{5}{4}$
 	
5.NF.5	

_____27. What is $\frac{15}{74}$ rounded to the nearest whole number?
 	
   a. 10   b. 15
 	
   c. 16   d. 20
 	
5.NBT.4	

_____28. Mr. Smith has 1,104 student photos to display around the school. He plans to put them on 48 poster boards with the same number of photos on each poster board. How many student photos will Mr. Smith place on each poster board?
 	
   a. 20   b. 22
 	
   c. 23   d. 24
 	
5.NBT.6	

_____29. Which statement describes the value of the expression below?
 	
$$67 \times \frac{1}{6}$$
 	
   a. The value is less than 67
   b. The value is equal to 67
   c. The value is greater than 67
   d. The value is greater than 0 and less than 1
 	
5.NF.5	

Question	Show your work

_____30. Each lap around Eastern Park is $3\frac{3}{4}$ miles. Janet rode her bike $\frac{2}{3}$ of a lap before one of the tires on her bike went flat. How many miles did Janet ride before one of the tires on her bike went flat?
 	
   a. $2\frac{1}{2}$ b. $2\frac{3}{4}$
 	
   c. $3\frac{1}{2}$ d. $3\frac{5}{7}$
 	
5.NF.6	

_____31. Which point on the number line below represents a value of 0.75?
 	
   a. Point A   b. Point B
 	
   c. Point C   d. Point D
 	
4.NF.6	

_____32. What is the value of the expression $\frac{1}{5}\div 4$?
 	
   a. $\frac{20}{1}$ b. $\frac{5}{4}$
 	
   c. $\frac{4}{5}$ d. $\frac{1}{20}$
 	
5.NF.7	

_____33. Cole has a rectangular garden with an area of 16.02 square meters. The length of the garden is 4.5 meters. What is the width, in meters, of the garden?
 	
   a. 3.56   b. 11.52
 	
   c. 16.12   d. 20.52
 	
5.NF.7	

| Question	Show your work

_____34. Which situation could the expression $\frac{1}{4} \div 3$ represent?
 	
  a. $\frac{1}{4}$ of a package of pencils shared equally among three friends
  b. The number of $\frac{1}{4}$ cup servings in three cups of popcorn
  c. $\frac{1}{3}$ of a stadium split into four equal sections
  d. A four foot long rope cut into $\frac{1}{3}$ foot pieces
 	
5.NF.7	

_____35. The decimal grid shown below is shaded and marked with Xs to model an expression.
 	
Which expression could be modeled by this grid?
 	
  a. 0.08 x 0.04   b. 0.08 x 0.40
 	
  c. 0.80 x 0.04   d. 0.80 x 0.40
 	
5.NBT.7	

_____36. Christopher wants to buy a notebook for $2.15, a pack of glue sticks for $5.08, and a pack of pens for $3.08. What is the total cost of the three items Christopher wants to buy?
 	
  a. $10.75   b. $10.31
 	
  c. $10.23   d. $10.11
 	
5.NBT.7	

Question	Show your work

_____37. Susan determined that the expression below is equal to 7.59.
 	
$\qquad$ 15.91 - 8.32
 	
Which expression can Susan use to check her answer?
 	
  a. 8.32 - 7.59   b. 8.32 + 7.59
 	
  c. 15.91 + 8.32   d. 15.91 + 7.59
 	
5.NBT.7	

_____38. Which expression is equivalent to 32?
 	
  a. (30 + 6) ÷ 3   b. 2 x (9 + 7)
 	
  c. 9 x (3 + 5)   d. 6 + 2 x 4
 	
5.OA.1	

_____39. Which statement is true about the values of the two expressions below?
 	
Expression A: 3 x (8 + 4)
Expression B: 8 + 4
 	
  a. The value of Expression B is three times the value of Expression A
  b. The value of Expression A is three times the value of Expression B
  c. The value of Expression A is three more than the value of Expression B
  d. The value of Expression B is three more than the value of Expression A
5.OA.2	

_____40. Which expression represents the phrase "triple the sum of 24 and 9"?
 	
  a. 3 + (24 + 9)   b. 3 x (24 + 9)
 	
  c. 3 + 24 + 9   d. 3 x 24 + 9
 	
5.OA.2	

Question	Show your work
_____41. Which expression means the same as the phrase below? *Subtract 3 from the product of 8 and 5* a. (5 x 8) + 3 b. (5 x 8) - 3 c. 5 x (8 - 3) d. 5 x (8 + 3) **5.OA.2**	
_____42. Which is the value of the expression below? $[(3 \times 4) - 6] + 4 \times 2$ a. 4 b. 14 c. 20 d. 30 **5.OA.1**	
_____43. Michele is 52 inches tall. Her father is 6 feet and 3 inches tall. Exactly how many inches taller is Michele's father than Michele? a. 11 b. 13 c. 23 d. 25 **5.MD.1**	
_____44. A student completes his homework in 1 hour and 34 minutes. How long, in minutes, does it take the student to complete his homework? a. 26 b. 60 c. 94 d. 134 **4.MD.1**	

Question	Show your work
_____45. The line plot shows the lengths of all the pieces of strong Emma used for an art project. She cut all these pieces from one original piece of string. **PIECES OF STRING** Length (feet) Emma has 1 foot of string left over. How long, in feet, was the original piece of string? a. $1\frac{6}{8}$ b. $1\frac{7}{8}$ c. $3\frac{7}{8}$ d. $6\frac{1}{8}$ *5.MD.2*	
_____46. Movie tickets cost $9.25 each and a large order of popcorn costs $7.75. What is the total cost of 5 movie tickets and a large order of popcorn? a. $22.00 b. $48.00 c. $54.00 d. $85.00 *4.MD.2*	
_____47. Which diagram represents a volume of one cubic unit? a. 1 unit / 1 unit b. 2 units / 2 units c. 2 units / 2 units / 2 units d. 1 unit / 1 unit / 1 unit *5.MD.3*	

| Question	Show your work

_____48. The diagram shows some 1-inch cubes placed in a box.
 	
5 in.
1 in.
3 in.
8 in.
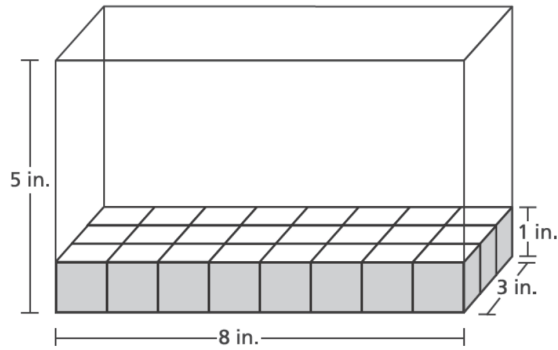 	
How many more 1-inch cubes are needed to completely fill the box?
 	
   a. 16   b. 24
 	
   c. 96   d. 120
 	
5.MD.3	

_____49. Rich's fish tank is in the shape of a right rectangular prism. It has a length of 6 feet, a width of 2 feet and a height of 4 feet. What is the volume, in cubic feet, of Rich's fish tank?
 	
   a. 12   b. 32
 	
   c. 36   d. 48
 	
5.MD.5	

_____50. Juliette made the jewelry box shown below. The jewelry box was shaped like a right rectangular prism.
 	
5 cm
4 cm
8 cm
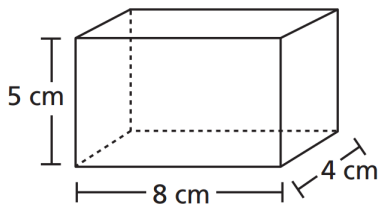 	
What was the volume, in cubic centimeters, of the jewelry box?
 	
   a. 17   b. 37
 	
   c. 160   d. 184
 	
5.MD.5	

Tony began putting together a rectangular puzzle. He completed the top edge and left edge of the puzzle, as shown below. Each piece is a square that has a side length of $2\frac{1}{2}$ centimeters.
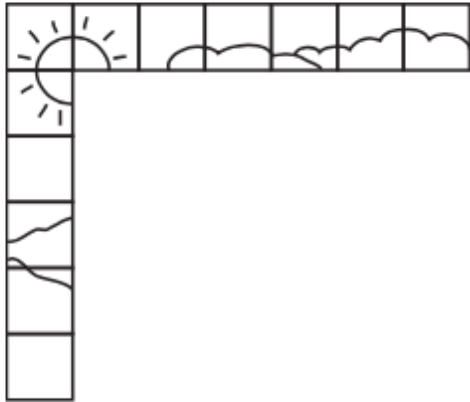
What is the total area, in square centimeters, of the completed puzzle?

Show your work.

In the expression $5 \times \dfrac{y}{7}$, what value of y would make a product greater than 5 ?

Explain your answer.

_____

_____

_____

_____

_____

Isabella is playing a game with the decimal numbers shown below.

1.5   1.05   0.15   0.105   1.50   0.015

She has to place each of the decimal numbers in one of the boxes shown below so that it makes a true number sentence. Each decimal number goes in only one box.

| A | < | B |

| C | > | D |

| E | = | F |

On the line above each decimal number, write the letter of the box where that number belongs.

_____   _____   _____   _____   _____   _____

| 1.5 | | 1.05 | | 0.15 | | 0.105 | | 1.50 | | 0.015 |

Bella has 6.3 kilograms of berries. She packs 0.35 kilogram of berries into each container. She then sells each container for $2.99. How much money will Bella earn if she sells all the containers?

Show your work.

Diane has pizza dough for making pizzas. She separates the dough into the three portions listed below.

- Portion A is 8.25 ounces.

- Portion B is twice as much as portion A.

- Portion C is twice as much as portion B.

What is the weight, in ounces, of portion B and the weight, in ounces, of portion C?

Show your work.