2023

Summer Math Packet

Entering

Grade 6

This packet encompasses the skills you learned in 5th grade and will help ensure you are prepared to enter 6th grade in September. Make sure to read the directions for each question carefully. You **MUST** show all your work. If you do your work on another sheet of paper, make sure to attach that to the end of the packet when you hand it in to your teacher in September.

This will be your first **TEST** grade of the new school year so make sure to do your best!

Due Date: Monday, September 11, 2023

Good luck and have a wonderful summer!

The Math Department

1. Choose the correct product for each expression given on the left.

	9,030	9,541	9,361	9,360
602 × 15	❐	❐	❐	❐
208 × 45	❐	❐	❐	❐
407 × 23	❐	❐	❐	❐
203 × 47	❐	❐	❐	❐

2. Juan answered 6 questions incorrectly on his math test.

Lucas incorrectly answered $\frac{2}{3}$ of the number that Juan answered incorrectly.

A. Explain how you know that Juan answered more questions incorrectly on the test than Lucas without multiplying.

B. How many questions did Lucas answer incorrectly on the test?

_____ questions

3. Don bought the furniture listed below. He paid $500 and will make monthly payments of $85 for the remaining amount. How long will it take to pay for the furniture?

| Furniture	Cost
Sofa	$445
Chair	$210
Table	$525

A 8 months   **C** 13 months

B 9 months   **D** 14 months

4. Tiana makes a punch by mixing 12 different types of juice together. The line plot shows the number of cups of each type of juice that she uses.


Amount of Juice (cups)
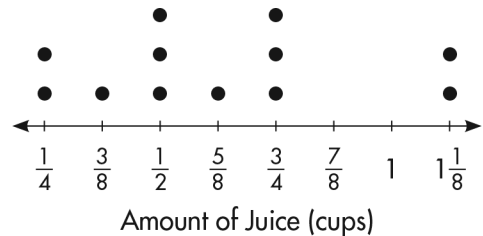
How many cups of punch did Tiana make in all? Show your work.

5. A. A path around a pond is 0.55 mile. Dylan walks around the pond 3 times. How far does he walk? Shade the grids to model the problem.
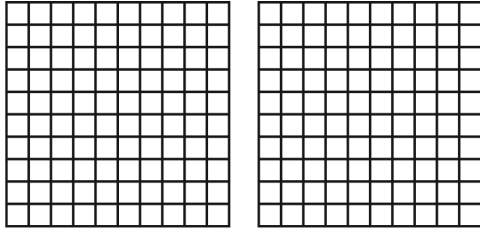
B. Pat walks around the pond twice. How far did Pat and Dylan walk in all?

6. Maylin is mailing a package that has the size shown below. What is the volume of the package? Write the expression you used to find the volume.

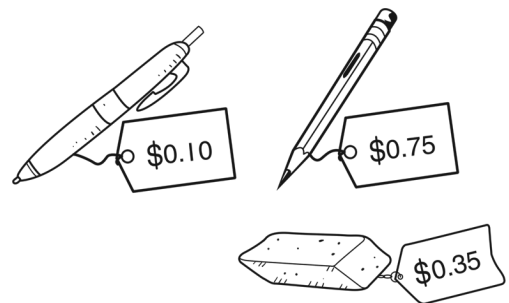
7 in.

Area of base: 54 in.^{2}
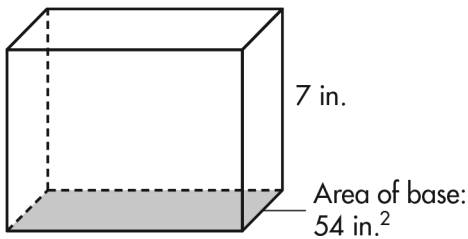
7. Which numerical expression represents the following calculation?

Add 12.60 to the quotient of 1.50 and 2.

A 12.60 + 1.50 − 2

B 12.60 + 2 × 1.50

C 12.60 + 1.50 ÷ 2

D 12.60 ÷ 2 × 1.50

8. A stack of 12 pennies is 18.24 millimeters high. How thick is each penny? How thick would a stack of 20 pennies be?
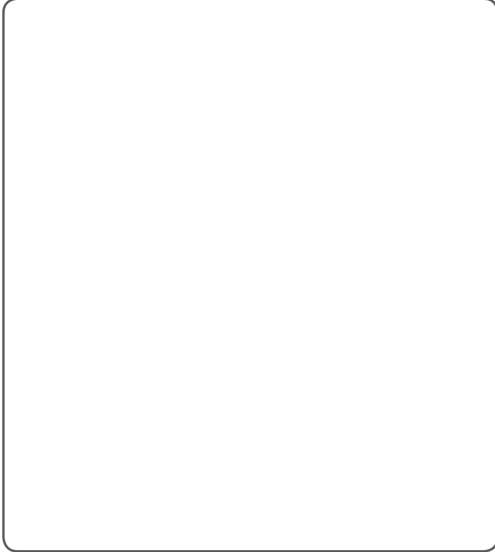
9. The school store sells the items shown below.

$0.10 $0.75

$0.35

Jenna has $5.00. She buys one of each item. How much money does she have left?

A $3.90   **C** $3.75

B $3.80   **D** $3.70

10. Claim: a rectangle can be cut into two isosceles triangles. Do you agree? Draw a diagram to support your answer.
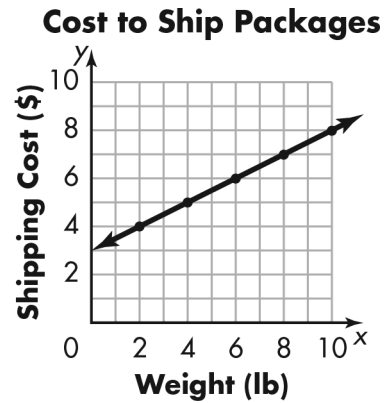
11. Select each true statement.

☐ All squares are rectangles.

☐ All quadrilaterals are parallelograms.

☐ All trapezoids are quadrilaterals.

☐ All parallelograms are rectangles.

☐ All rhombuses are squares.

12. Insert parentheses to make the statement true.

18 − 12 × 5 + 4 × 2 = 38

13. What is the shipping cost for a package weighing 8 pounds? Use the graph below.

Cost to Ship Packages

14. Select each true statement.

☐ 204.640 > 204.215

☐ 58.300 = 58.30

☐ 941.705 > 941.74

☐ 2.061 > 2.3

☐ 54.06 = 54.60

15. Anna and Jayla are reading the same book. Anna is on page 150 and reads 7 pages a day. Jayla is on page 110 and reads 15 pages a day. After how many days will Anna and Jayla have read the same number of pages? Explain.

16. Which expression is NOT equal to 36?

   A (48 ÷ 8) × 3 + 2

   B (9 + 9 ÷ 3) × 3

   C 3 × (16 − 4 × 1)

   D (22 − 2 × 5) × 3

17. For each sentence, select a word that will make the statement true, and write the word in the box.

Always   sometimes   never

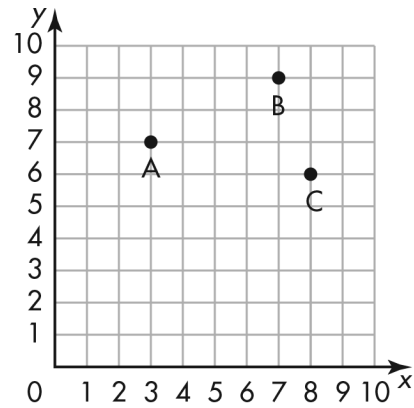Right triangles are

[_____] isosceles triangles.

Obtuse triangles are

[_____] acute triangles.

Scalene triangles are

[_____] obtuse triangles.

Equilateral triangles are

[_____] acute triangles

18. Write a number in each box to identify the coordinates of each point.
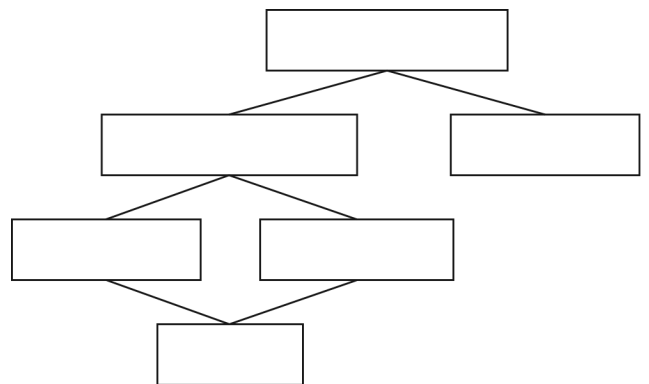

A: ([ ] , [ ])

B: ([ ] , [ ])

C: ([ ] , [ ])

19. Write each figure name in the correct box to show how the figures are related. Each name will be used only once.

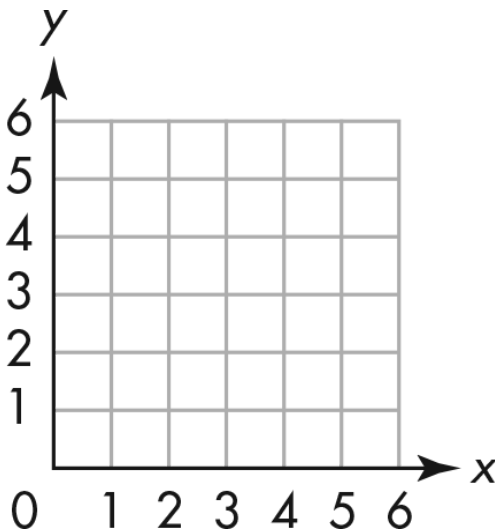| parallelograms quadrilaterals rectangles
rhombuses   squares   trapezoids |
| --- |

20. Write a numerical expression that represents the following calculation.

Subtract 9 from the quotient of 48 and 4.

21. Three vertices of a triangle are located at A (5, 4), B (3, 1), and C (2, 5). Graph and label each of the three vertices.

22. Alisha and Peter both make batches of granola, but they use different recipes. Alisha's recipe uses 3 cups of oats. Peter's recipe uses 5 cups of oats.

A. Complete the table to show the amount of oats that each person uses for different numbers of batches.

Number of Batches	Cups of Oats Used by Alisha	Cups of Oats Used by Peter
1		
2		
3		
4		

B. Write a number in each box to form an ordered pair that describes the amount of oats each person will use to make 7 batches. The first number should be the amount of oats that Alisha will use, and the second number should be the amount of oats that Peter will use.
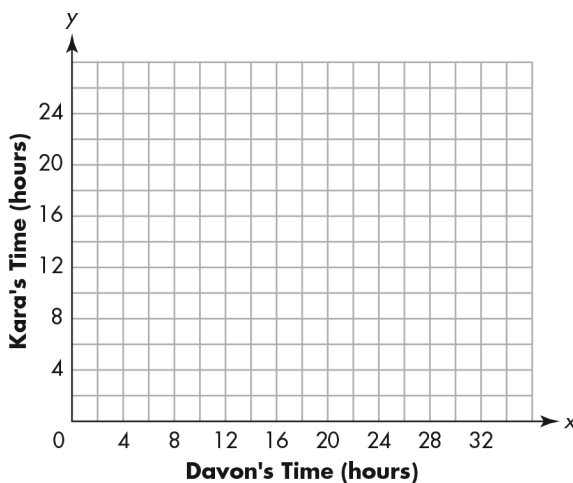
(☐ , ☐)

23. Each week, Devon will work 6 hours and Kara will work 4 hours.

A. Write a number in each box to complete the ordered pairs showing the total number of hours that Devon and Kara will have worked after each week.

(6, 4), (12, ☐), (☐, 12),

(24, 16), (☐,☐)

B. Plot the ordered pairs on the graph.

24. Which expression represents a number that is three times as great as the product of 14 and 9?

A 3 + (14 × 9)

B (14 + 9) × 3

C 3 × (14 × 9)

D (14 × 9) ÷ 3

25. Use each number in the box below to complete the equations that follow.

| 2 | 4 | 6 | 8 |

(36 ÷ ☐) + (8 ÷ ☐) = 7

(☐ × 5) – ☐ = 6

**26.** Write a numerical expression that represents the following calculation.

Multiply 4 by the sum of 2, $3\frac{1}{2}$, and 1.

27. Emma and Olivia are both running toward a bench. Emma is 50 feet from the bench and gets 6 feet closer each second. Olivia is 35 feet from the bench and gets 4 feet closer each second. The table shows the distances of both runners from the bench after the first 4 seconds.

Distance from Bench (ft)

Hour	Start	1	2	3	4
Emma	50	44	38	32	26
Olivia	35	31	27	23	19

Graph the data for the distance of each runner from the bench. Draw a line to connect the data points, and extend the line to show the distances as each runner approaches the bench. How far will Emma be from the bench when Olivia is 15 feet from it?
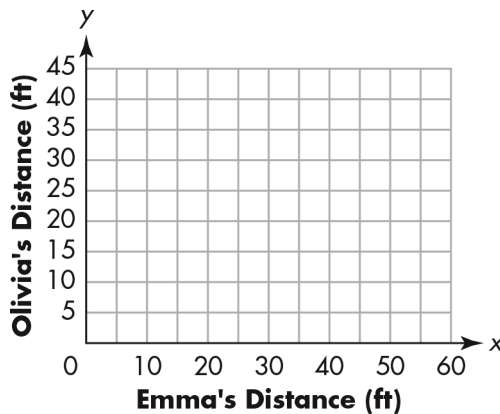
28. The tables below show the water level two identical tanks would have if each were filled using different pipes.

Pipe 1
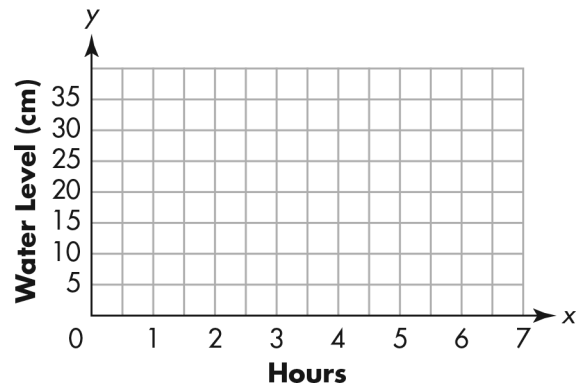Rule: Add 4 centimeters each hour.

Hour	1	2	3	4
Level (cm)	4	8	12	16

Pipe 2
Rule: Add 7 centimeters each hour.

| Hour	1	2	3	4
Level (cm)	7	14	21	28

A. Plot the ordered pairs from each table on the coordinate grid. Then draw and label a line segment connecting each set of ordered pairs to compare the data.


B. How much deeper would the water level be after 5 hours in the tank filled using Pipe 2 than the tank filled using Pipe 1?

29. The adult leaf-footed bug is about $\frac{3}{4}$ -inch long. The adult thorn bug is about $\frac{1}{2}$ -inch long. The model shows how the lengths of the bugs are related.

$\frac{3}{4}$-in. long

$\frac{1}{2}$	x
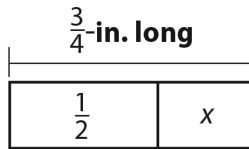
How much longer is the leaf-footed bug than the thorn bug? Show your work.

30. The graph shows Jacob's pay for working different numbers of hours.
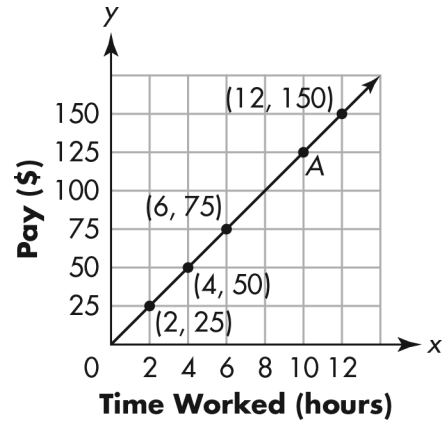
A. What are the coordinates of Point *A* on the graph?

B. What does the ordered pair for Point *A* represent?