Monroe Township Middle School

6TH GRADE MATHEMATICS RESOURCE CLASS PREPARATION PACKET

2025

ALL PROBLEMS MUST BE COMPLETED IN **PENCIL** AND **SHOW ALL WORK

The packet is a representation of the types of items you'll need to have mastered BEFORE 6th Grade Math, so we strongly encourage that you include this packet in your summer festivities!

You'll be responsible for handing in the completed packet with all work shown ON THE FIRST DAY OF SCHOOL.

FIRST/LAST NAME: _____

Operations and Algebraic Thinking

1) Write a numerical expression for the **product** of eight and four.

2) Write the first five terms in the pattern, **starting with the number zero**:

The rule: add 19

_____, _____, _____, _____, _____

3) Simplify the expression. Remember PEMDAS

(15 – 3) + 3 x 4

4) Complete the table. Write a rule for completing the table:

Input	Output
4	**28**
5	**35**
8	**56**
	77
13	

Rule: _____

5) The table below shows the number of gallons of gasoline in the gas tank each second as it fills. If the pattern continues, how much gas will be in the tank after 6 seconds?

Seconds Pumping Gasoline	1	2	3	4	5	6
Gallons in the Tank	0.25	0.50	0.75	1.00		

6) Which expression shows how to solve 3×78 with mental math. **(You can check by finding the product)**

A. $(3 \times 7) + (3 \times 8)$

B. $(3 \times 70) + (3 \times 8)$

C. $(3 \times 70) + (3 \times 80)$

D. $(7 \times 30) + (8 \times 3)$

NUMBER AND OPERATIONS IN BASE TEN

7) Write the number $\boldsymbol{five\ and\ twenty - three\ hundredths}$ in standard form.

8) Write the following in standard form.

$$(2 \times 100) + (6 \times 10) + (2 \times 1) + (0.3) + (0.09)$$

9) Write 10^7 in standard form. _____

10) Megan's check for lunch at Luigi's Pizzeria was $\$11.78$. She paid with a $20 bill. **How much change** did she receive?

11) Describe the rule for the following pattern and name the next three terms.

13 130 1,300 13,000 _____ _____ _____

Rule: _____

12) Insert $>, < or =$ to make the following statement true. 0.78 _____ 0.091

13) Write $2{,}459$ in expanded form. (Example: 500 + 20 + 6 = 526)

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14) Write the following words as decimals:

Two hundred four and fifty seven thousandths

15) Round 164.361 to the nearest **tenth**. _____

16) What is the **value** of the underlined digit in the number below?

8**5**,024.290

NUMBER AND OPERATIONS – DECIMALS

Directions: Find the sum, difference, product, or quotient. Show all work.

17) $276 \div 12 =$

18) $8{,}452 \times 7 =$

19) $49 + 5.4 =$

20) $5{,}048 \div 2 =$

21) $6{,}295 - 273 =$

22) $4{,}000 - 742 =$

23) $7 - 3.98 =$

24) $786 + 1{,}238 + 27 + 5 =$

NUMBER AND OPERATIONS – FRACTIONS

25) Katie works 2 days a week after school. On Monday she works $3\frac{1}{2}$ hours and on Wednesday she works $4\frac{2}{3}$ hours. **How many more hours** does she work on Wednesday?

26) It takes $\frac{3}{4}$ cups of ice cream and $\frac{1}{2}$ cups of milk to make a milkshake. How many cups is that **altogether?**

27) Jimmy lives $\frac{7}{8}$ of a mile from school. Billy lives **twice as far** as Jimmy. How far does Billy live from school?

28) Three students shared a pizza. One student ate $\frac{2}{8}$ of the pizza, another ate $\frac{1}{4}$ of the pizza and the third student ate the rest. What fraction of the pizza was the third student's portion?

29) On a class trip, $\frac{1}{3}$ of the seats on the bus are reserved for students and $\frac{1}{6}$ of the seats are reserved for teachers. What fraction of the seats are reserved **altogether**?

Directions: Find the sum or difference. Show all work.

30) $2 - 1\frac{2}{3} =$ **=**

31) $\frac{1}{3} + \frac{1}{4} =$

32) $1\frac{5}{8} - \frac{1}{3} =$

33) $1\frac{1}{4} + 2\frac{2}{3} =$

Measurement and Data

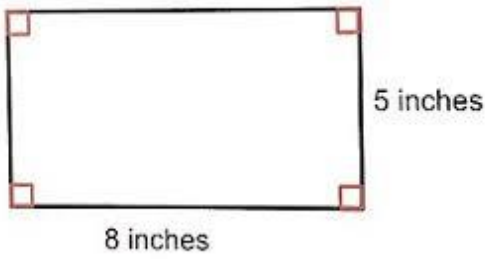
34) Leah is 48 inches tall and Carol is 4 feet 7 inches tall.

Which girl is taller?

12 inches = 1 foot

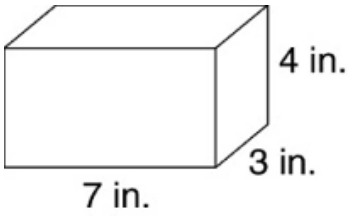
How much taller is she?

35) Find the area of the rectangle below. La**bel your answer. (Area = L x W)**



Show your work here.

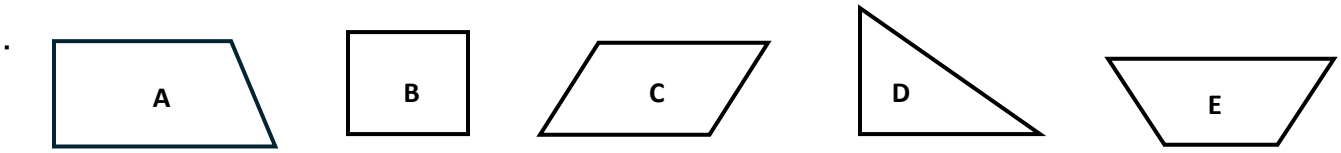
36) What is the volume of the figure shown? **Label your answer. (V = l x w x h)**



Show all work here.

GEOMETRY

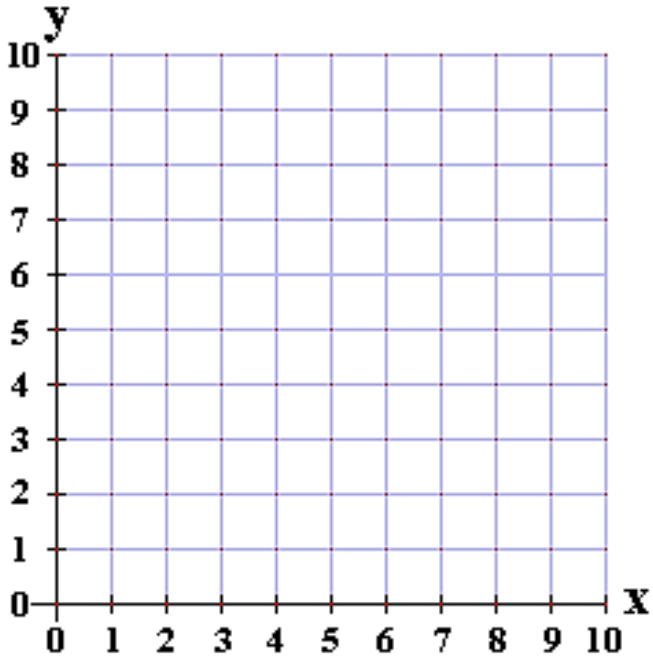
37) Which quadrilateral has two acute angles, two obtuse angles, and two pairs of opposite parallel sides?



38) Plot **and** label the following points on the coordinate plane:

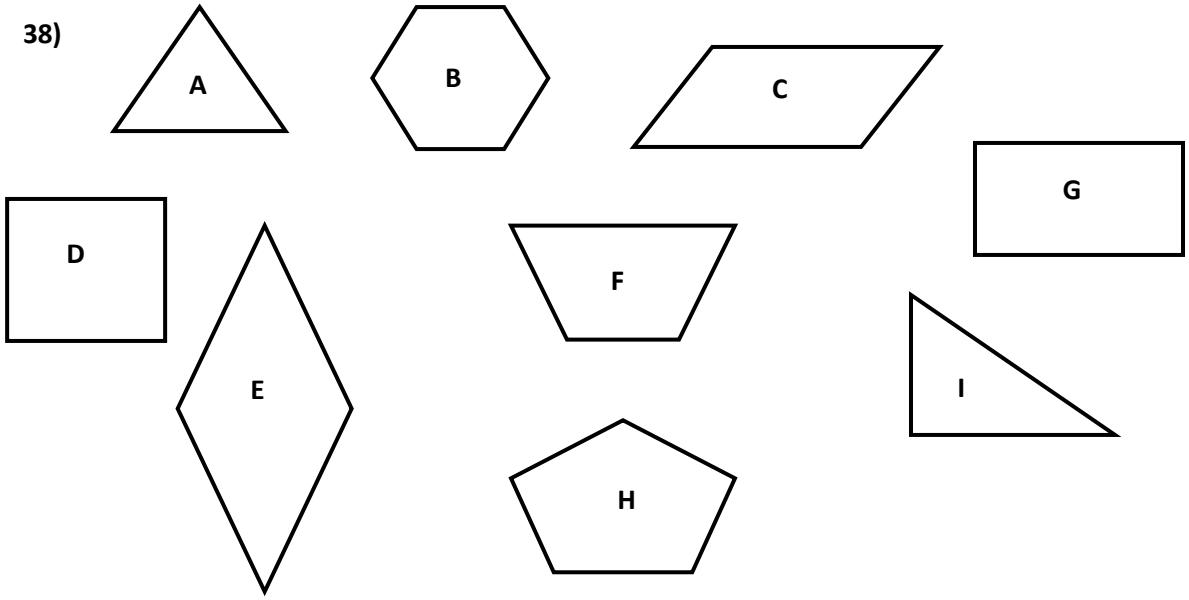
A (1, 5) **B** (1, 9) **C** (7, 5) **D** (7, 9)

- Connect the points
- Name the figure _____



Directions: Write the letter of all the shapes above that fit into each of the categories below. ***(You may use a shape more than once.)***

38)



Contain at least 1 right angle _____

Parallelogram _____

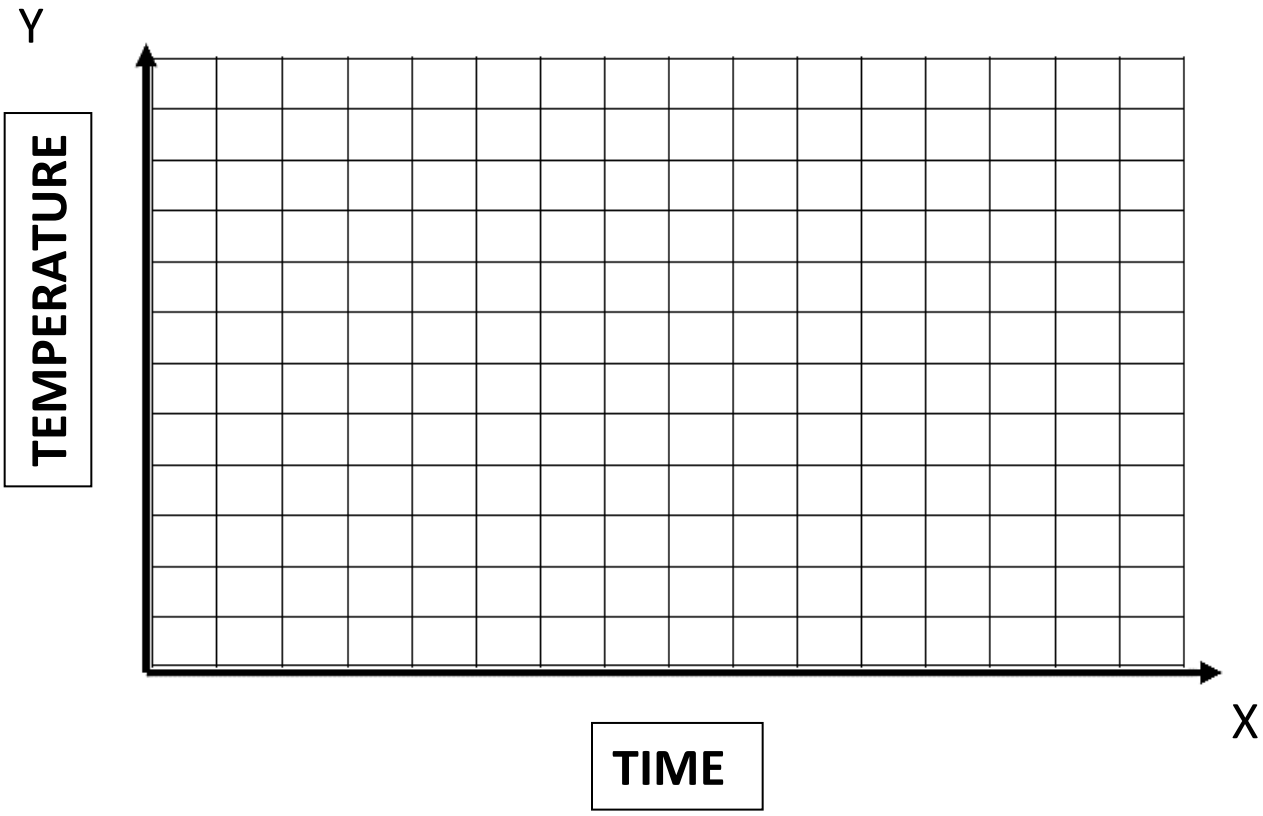
Quadrilateral_____

Rectangle _____

39) The temperature in Michelle's house from 9:00 a.m. **to** 7:00 p.m. is recorded in the table below. Make a line graph to display the information**.** **Remember to give the graph a title.**

Time	9 am	11 am	1 pm	3 pm	5 pm	7 pm
Temperature	65˚F	60˚F	63˚F	68˚F	65˚F	60˚F

Title: _____



What is the **approximate** temperature in Michelle's house at 2:00 pm? _____

What is the **difference** in temperature from 1:00 p.m. to 3:00 pm? _____