Monroe Township Middle School

6TH GRADE MATHEMATICS PREPARATION PACKET

2026-2027

ALL PROBLEMS MUST BE COMPLETED IN **PENCIL** AND **WITHOUT A CALCULATOR**

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) Simplify the expression **28 – 12 ÷ 3 + (22-9)**

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

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

Rule: _____

4) 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
Gallons in the Tank	0.35	0.70	1.05	1.40

NUMBER AND OPERATIONS IN BASE TEN

5) Write the number $nine\ and\ thirty - five\ thousandths$ in standard form.

6) Write 7^4 in standard form. _____

7) Order the following from **greatest to least**:

$$47.021, \quad 47.012, \quad 47.102, \quad 47.210$$

_____, _____, _____, _____

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

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

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

672.38**9** _____

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

68,073.2**9**5 _____

12) Round 284.563 to the nearest hundredth. _____

13) Round 1.99 to the nearest tenth. _____

14) Round 59,250 to the nearest hundred. _____

15) Round 34.2403 to the nearest thousandth. _____

16) Simplify the expression. $\mathbf{18 \div 3 + (30 - 20 + 4) \times 3}$

NUMBER AND OPERATIONS – DECIMALS

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

17) $5{,}472 \div 12 =$	**18)** $1{,}346 \times 49 =$
19) $17 + 8.7 =$	**20)** $26{,}402 \div 86 =$
21) $85.3 \times 79 =$	**22)** $10{,}000 - 187 =$

23) $7 - 3.98 =$

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

NUMBER AND OPERATIONS – FRACTIONS

Directions: Find the sum or difference. Show all work. **Simplify** final answers!

25) $8 - 3\frac{2}{3} =$ **=**

26) $\frac{2}{5} + \frac{1}{4} =$

27) $2\frac{4}{9} - \frac{1}{5} =$

28) $22 - 8\frac{1}{6} =$

29) $1\frac{1}{6} - \frac{2}{3} =$

30) $7\frac{1}{6} + 2\frac{3}{4} =$

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

32) It takes $\frac{5}{6}$ cups of ice cream and $\frac{3}{4}$ cups of milk to make a milkshake. How many cups is that altogether?

33) Jimmy lives $\frac{4}{5}$ of a mile from school. Billy lives twice as far as Jimmy. How far does Billy live from school?

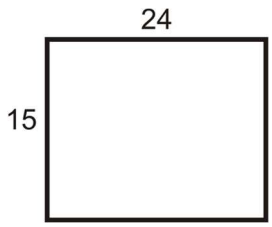
34) Three students shared a pizza. One student ate $\frac{1}{6}$ of the pizza, another ate $\frac{1}{4}$ of the pizza and the third student ate the rest. What fraction of the pizza was the third student's portion?

MEASUREMENT AND DATA

35) Jack is hiking a 3-mile trail. He has hiked 1,276 ft. How many feet does Jack have left to hike?

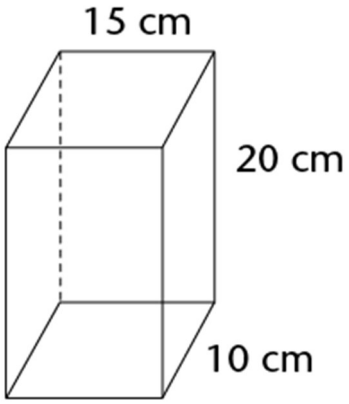
How long is the trail in feet? ***1 mile = 5280 feet***	How many more feet does he have left to hike?

36) Find the **area** and **perimeter** of the rectangle below. **Label your answer.**



Write formula(s) first, then solve showing all steps.

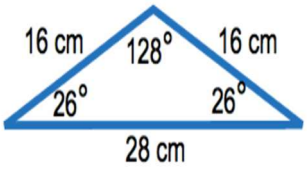
37) What is the volume of the figure shown? **Label your answer.**

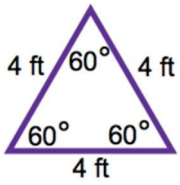


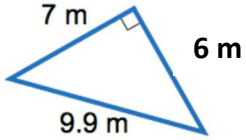
Write formula first, then solve showing all steps.

38) Jessica made a time capsule using a box that is 18 in long, 12 in wide and 16 in tall. What is the volume of the time capsule?

39) Classify each triangle below by its **sides** and **angles:**

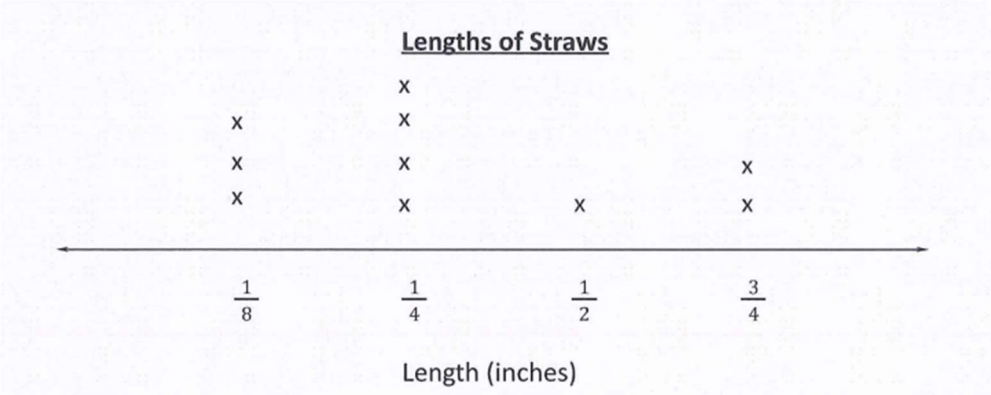






Side:	Side:	Side:
Angle:	Angle:	Angle:

40) A class was picking straws from a big pile and then using a ruler to measure the length of each straw. They recorded the lengths of the straws picked in the line plot below. Use the line plot to answer the questions that follow.

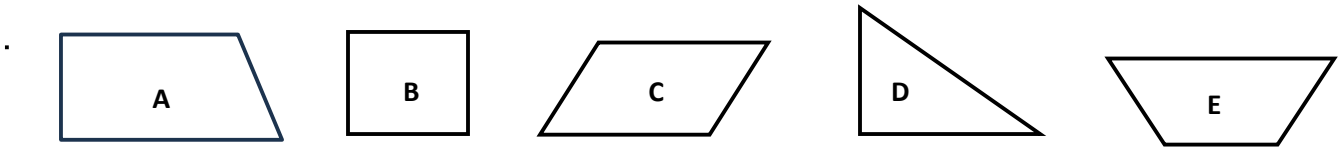


a) Which straw length was the most frequent?

b) How many students are in the class?

GEOMETRY

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

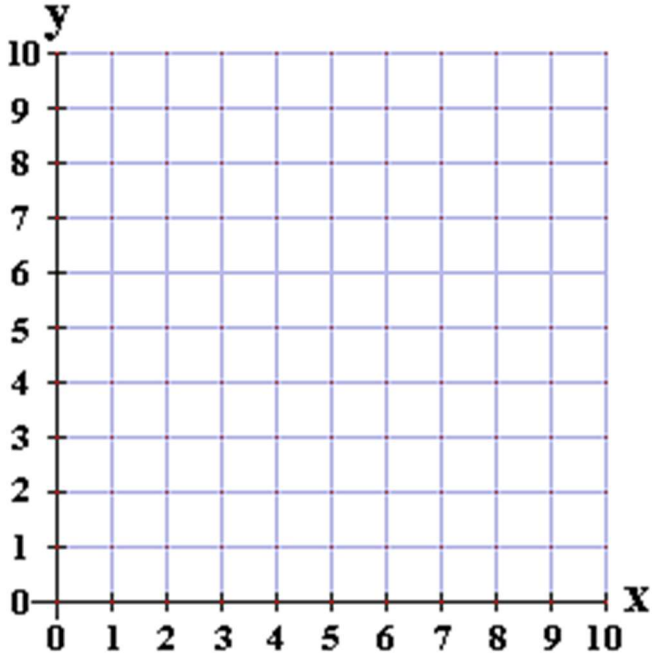


Name the selected shape above: _____

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

A (2, 3) **B** (2, 8) **C** (5, 8) **D** (5, 3)

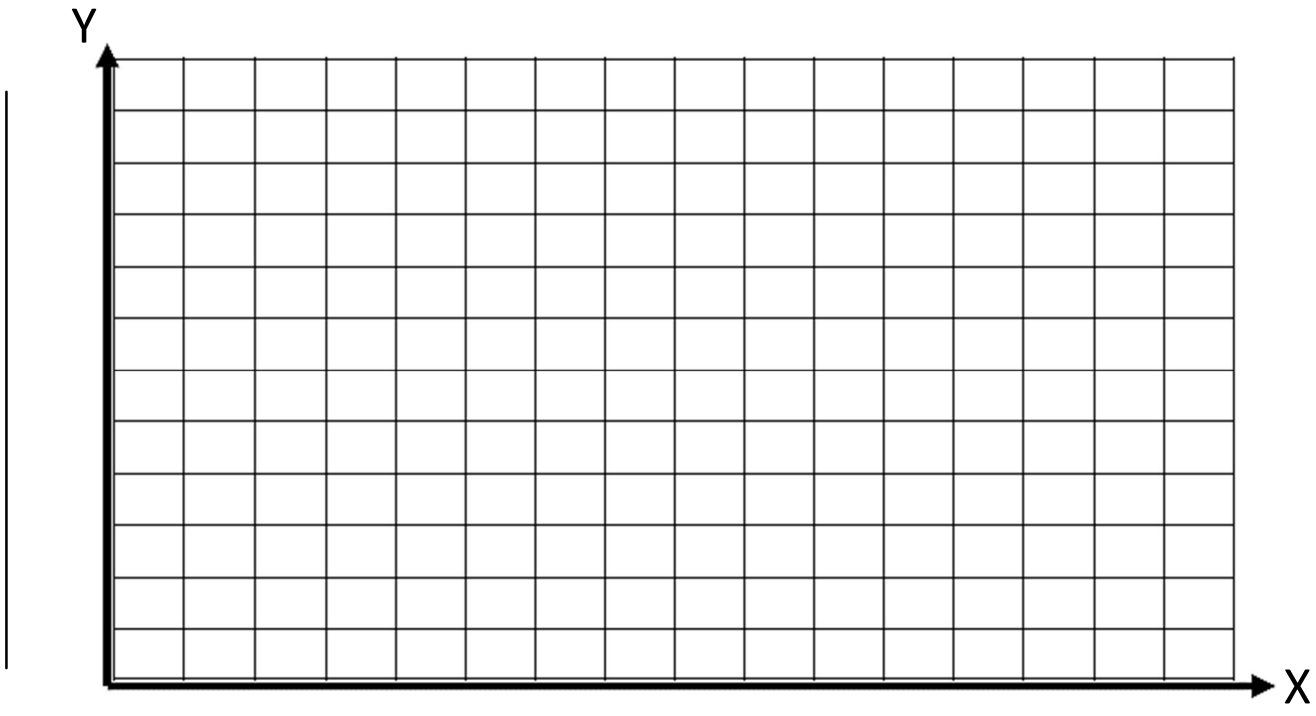
- Label and connect the points
- Name the figure _____
- Find the area of the figure using a formula



43) The temperature in Noelle'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 label the graph on both the x and y axes and give it a title.**

Time	9 am	11 am	1 pm	3 pm	5 pm	7 pm
Temperature	82˚F	80˚F	83˚F	88˚F	85˚F	80˚F

Title: _____



_____

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

What is the **difference** in temperature from 11:00 a.m. to 1:00 pm? _____