MATH MADNESS #75

1.
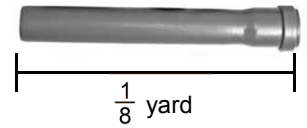If the rule for this table is to multiply the input number by 2 and then subtract 1, which set of numbers belongs in the output column?

a. 5, 9, 13, 17
b. 3, 9, 14, 19
c. 0, 2, 4, 6
d. 3, 7, 11, 15

Input	Output
2	
4	
6	
8	

2.
This chart shows the population of three North Carolina cities. Which of the following shows these populations in the correct order?

Cities in North Carolina	
City	Population
Durham	209,009
Greensboro	255,000
Winston-Salem	222,655

a. 255,000 > 222,655 > 209,009
b. 255,000 > 209,009 > 222,655
c. 209,009 > 222,655 > 255,000
d. 222,655 > 255,000 > 209,009

3.
Last year a soda plant bottled 1,346,455 bottles of root beer and 943,906 bottles of limeade. How many more bottles of root beer were bottled than limeade?

a. 402,549
b. 402,551
c. 403,549
d. 403,551

4.
The distance around the block is $\frac{2}{3}$ mile. How many times will Mr. Arnold need to walk around the block if his goal is to walk 4 miles?

a. 5
b. 6
c. 7
d. 8

5.
Mr. Chi has pipe sections that are each $\frac{1}{8}$ yard long. If he connects the pipe sections together to make a 2 yard long stretch of piping, how many $\frac{1}{8}$ yard sections will he use?
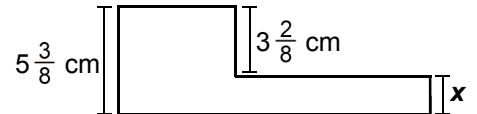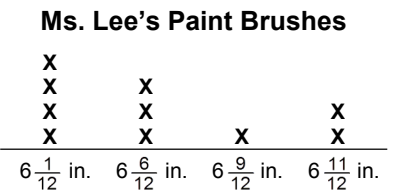
a. 4
b. 8
c. 12
d. 16

$\frac{1}{8}$ yard

6.
What is the length of side x?

a. $1\frac{1}{8}$ cm
b. $2\frac{5}{8}$ cm
c. $2\frac{1}{8}$ cm
d. $8\frac{5}{8}$ cm

$5\frac{3}{8}$ cm $3\frac{2}{8}$ cm x

7.
This line plot shows the length of different paint brushes in Ms. Lee's art room. What is the difference in length between the longest and shortest paint brush?
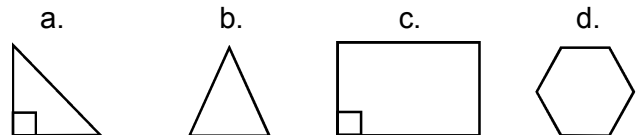
a. $\frac{1}{3}$ in.   c. $\frac{5}{6}$ in.
b. $\frac{3}{4}$ in.   d. $\frac{12}{12}$ in.

Ms. Lee's Paint Brushes

$6\frac{1}{12}$ in. $6\frac{6}{12}$ in. $6\frac{9}{12}$ in. $6\frac{11}{12}$ in.

8.
Which polygon has exactly one pair of perpendicular lines?

a.   b.   c.   d.

9 & 10 (2 points) Short Answer / Extended Response

What is the value of 8 × (z + 6) if z = 4? Explain how you found the answer.