Name _____ Date ____/____/_____

Problem Set #13 Math 8

1. Triangle ABC is similar to triangle DEF. The lengths of the sides of ΔABC are 5, 8, and 11. What is the length of the shortest side of ΔDEF if its perimeter is 60?

    1. 10
    2. 12.5
    3. 20
    4. 27,5

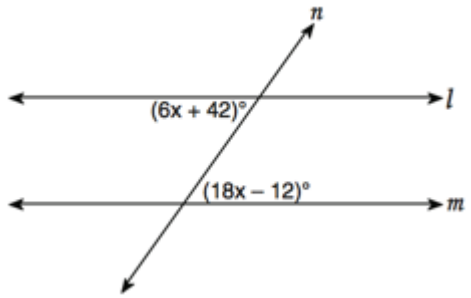
2. If five times a number is less than 55, what is the greatest possible integer value of the number?

    1. 12
    2. 11
    3. 10
    4. 9

3. Which verbal expression is represented by 2(x + 4)?

    1. twice the sum of a number and four
    2. the sum of two times a number and four
    3. two times the difference of a number and four
    4. twice the product of a number and four

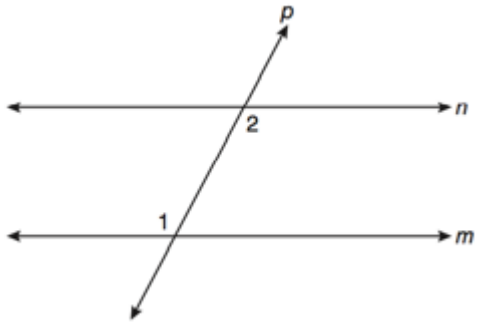
4. Line n intersects lines l and m, forming the angles shown in the diagram below.



Which value of x would prove l | | m?

    1. 2.5
    2. 4.5
    3. 6.25
    4. 8.75

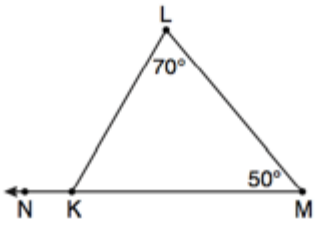
5. In the diagram below, line p intersects line m and line n.



If m∠1 = 7x and m∠2 = 5x + 30, lines m and n are parallel when x equals

1. 12.5
2. 15
3. 87.5
4. 105

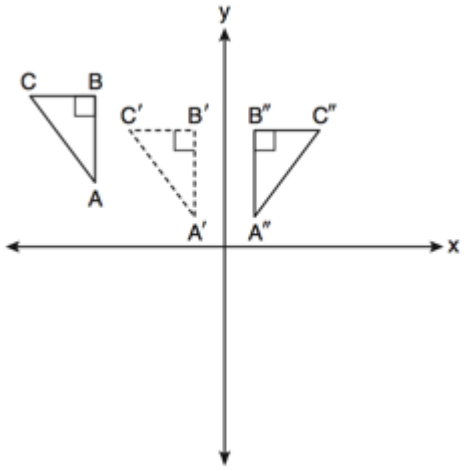
6. In the diagram of $\triangle KLM$ below, $m\angle L = 70$, $m\angle M = 50$, and $\overline{MK}$ is extended through N.



What is the measure of ∠LKN?

1. 60°
2. 120°
3. 180°
4. 300°

7. In the diagram below, $\triangle A'B'C'$ is a transformation of $\triangle ABC$, and $\triangle A''B''C''$ is a transformation of $\triangle A'B'C'$.



The composite transformation of $\triangle ABC$ to $\triangle A''B''C''$ is an example of a

1. reflection followed by a rotation
2. reflection followed by a translation
3. translation followed by a rotation
4. translation followed by a reflection

8. A school newspaper will survey students about the quality of the school's lunch program. Which method will create the least biased results?

1. Twenty-five vegetarians are randomly surveyed.
2. Twenty-five students are randomly chosen from each grade level.
3. Students who dislike the school's lunch program are chosen to complete the survey.
4. A booth is set up in the cafeteria for the students to voluntarily complete the survey.

9. Ben has four more than twice as many CDs as Jake. If they have a total of 31 CDs, how many CDs does Jake have?

1. 9
2. 13
3. 14
4. 22

10. A soda container holds $5\frac{1}{2}$ gallons of soda. How many ounces of soda does this container hold?

1 quart = 32 ounces 1 gallon = 4 quarts

1. 44
2. 176
3. 640
4. 704

11. Gabriella has 20 quarters, 15 dimes, 7 nickels, and 8 pennies in a jar. After taking 6 quarters out of the jar, what will be the probability of Gabriella randomly selecting a quarter from the coins left in the jar?

1. $\frac{14}{44}$
2. $\frac{30}{44}$
3. $\frac{14}{50}$
4. $\frac{20}{50}$

12. Marie currently has a collection of 58 stamps. If she buys s stamps each week for w weeks, which expression represents the total number of stamps she will have?

1. $58sw$
2. $58 + sw$
3. $58s + w$
4. $58 + s + w$

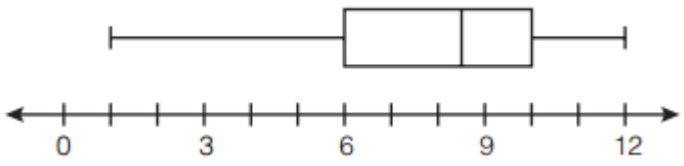
13. Maria has a set of 10 index cards labeled with the digits 0 through 9. She puts them in a bag and selects one at random. The outcome that is most likely to occur is selecting

1. an odd number
2. a prime number
3. a number that is at most 5
4. a number that is divisible by 3

14. Add: 23/30 + 8/45

a. 31/76
b. 7/9
c. 17/18
d. 1 28/45

15. What is the value of the third quartile shown on the box-and-whisker plot below?



1. 6
2. 8,5
3. 10
4. 12

16. Felicity babysat 2 hours each night for 10 nights. She earned a total of $180 babysitting. Felicity wants to calculate her hourly rate. How much did Felicity earn per hour babysitting?

a. $9

b. $15

c. $18

d. $20

17. What is the value of the expression below when $c = 5$ and $d = 4$?

$$6c^2 - 5d + 8$$

a. 48

b. 79

c. 138

d. 888

18. The set of numbers 1, 7, 11, and 36 contains values for m. What value of m makes the equation below true?

$$4m + 8 = 36$$

a. 1

b. 7

c. 11

d. 36

19. Paul bought a package of 6 spiral notebooks for a total cost of $13.50. Which equation represents p, the cost, in dollars, of each notebook?

a. $p = 13.50 - 6$

b. $p = 13.50 \times 6$

c. $p = 13.50 + 6$

d. $p = 13.50 \div 6$

20. Mr. Turner bought x boxes of pencils. Each box holds 25 pencils. He left 3 boxes of pencils at home and took the rest to school. Which expression represents the total number of pencils he took to school?

1. $22x$

2. $25x - 3$

3. $25 - 3x$

4. $25x - 75$