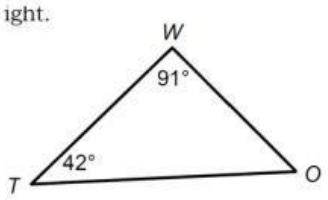
Republic of the Philippines
Department of Education
Region V
Division of Ligao City
PAULBA NATIONAL HIGH SCHOOL

FOURTH QUARTERLY TEST IN MATH 8

Directions: *Read and understand each item carefully. Choose the letter of your answer and shade the corresponding letter on your answer sheet.*

1. Which theorem states that if one side of a triangle is longer than a second side, then the angle opposite the first side is larger than the angle opposite the second side?
   A. Triangle Inequality Theorem C. Exterior Angle Inequality Theorem
   B. Angle-Side Relationship Theorem D. Hinge Theorem or SAS Inequality Theorem
2. In Triangle Inequality Theorem, which of the following describes the relationship of the sum of its two sides to its third length?
   A. greater than C. less than
   B. greater than or equal to D. less than or equal to
3. Which of the following theorems on triangle inequalities states that the measure of an exterior angle of a triangle is greater than the measure of remote interior angle?
   A. Triangle Inequality Theorem C. Exterior Angle Inequality Theorem
   B. Angle-Side Relationship Theorem D. Hinge Theorem or SAS Inequality Theorem
4. Which of the following theorems deals with the two triangles whose two corresponding sides are congruent and whose included angle are unequal?
   A. SAS Inequality Theorem C. Angle-Side Relationship Theorem
   B. SSS Inequality Theorem D. Exterior Nagle Inequality Theorem
5. Which of the following could NOT be used as the length of the sides of a triangle?
   A. 3, 3, 3 B. 4, 5, 10 C. 5, 7, 9 D. 10, 20, 20
6. Which of the following statements is **FALSE**?
   A. Any lengths of the sides can be used to form a triangle.
   B. The largest angle of a triangle is opposite to the longest side.
   C. The smallest side of a triangle is opposite to the smallest angle.
   D. The sum of any two sides of a triangle is greater than the third side.
7. If two sides of one triangle are congruent to two sides of another triangle, but the third side of the first triangle is longer than the third side of the second, then the included angle of the first triangle is larger than the included angle of the second. Which of the following theorems pertains to two triangles whose two corresponding sides are congruent and whose third sides are unequal?
   A. Triangle Inequality Theorem
   B. Exterior Angle Inequality Theorem
   C. Hinge Theorem or SAS Inequality Theorem
   D. Converse of Hinge Theorem or SSS Inequality Theorem

ight.



For items 8 to 10, refer to the figure at the right.

8. Which side of ΔTWO is the longest?
   A. $\overline{WT}$ B. $\overline{OW}$ C. $\overline{OT}$ D. Cannot be determined
9. Which side is the shortest?
   A. $\overline{WT}$ B. $\overline{OW}$ C. $\overline{OT}$ D. Cannot be determined
10. What theorem of triangle inequalities is applied?
    A. SSS Inequality Theorem C. Angle-Side Relationship Theorem
    B. Triangle Inequality Theorem D. Exterior Angle Inequality Theorem
11. In Δ NET, $\overline{NE}$= 14 cm, $\overline{ET}$ = 15 cm, $\overline{NT}$ = 16 cm. What is the correct order of the angles when arranged from least to greatest?
    A. ∠E, ∠N, ∠T B. ∠E, ∠T, ∠N C. ∠T, ∠E, ∠N D. ∠T, ∠N, ∠E
12. Which of the following theorems states that "base angles of isosceles triangles are congruent"?
    A. Linear Pair Theorem C. Vertical Angles Theorem
    B. Exterior Angle Theorem D. Isosceles Triangle Theorem
13. What triangle inequality theorem states that "If one side of a triangle is longer than a second side, then the angle opposite the longer side is larger than the angle opposite the second side"?
    A. Exterior Angle Inequality Theorem C. Triangle Inequality Theorem 2 (Aa→Ss)
    B. Triangle Inequality Theorem 1 (Ss→Aa) D. Triangle Inequality Theorem 3 (S1 + S2 > S3)

LIVEWORKSHEETS

14. Which statement defines Exterior Angle Inequality Theorem?
    A. The sum of the lengths of any two sides of a triangle is greater than the length of the third side.
    B. The measure of an exterior angle of a triangle is greater than the measure of either remote interior angle.
    C. If one side of a triangle is longer than a second side, then the angle opposite the longer side is larger than the angle opposite the second side.
    D. If one angle of a triangle is larger than a second angle, then the side opposite the larger angle is longer than the side opposite the second angle.
15. What can be said about the alternate interior angles if two parallel lines are cut by a transversal?
    A. Complementary B. congruent C. parallel D. perpendicular
16. What do you call those two coplanar lines that do not intersect?
    A. Congruent B. parallel C. perpendicular D. supplementary

For items 17– 18, refer to Figure 1 below. $e \| f$ and d is a transversal line.

17. Which of the following are corresponding angles?
    A. $\angle 1$ *and* $\angle 8$, $\angle 2$ *and* $\angle 3$
    B. $\angle 2$ *and* $\angle 7$, $\angle 1$ *and* $\angle 6$
    C. $\angle 4$ *and* $\angle 8$, $\angle 1$ *and* $\angle 8$
    D. $\angle 5$ *and* $\angle 3$, $\angle 2$ *and* $\angle 8$
18. Which of the following statements is **NOT** correct?
    A. $\angle 2$ and $\angle 3$ are congruent.
    B. $\angle 3$ and $\angle 8$ form a linear pair.
    C. $\angle 4$ and $\angle 7$ are congruent angles.
    D. $\angle 5$ and $\angle 6$ are supplementary angles.

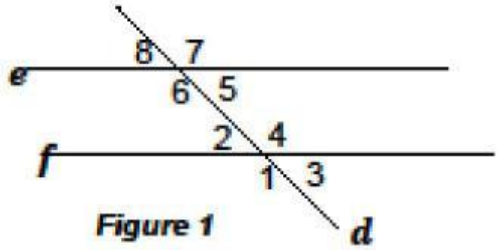
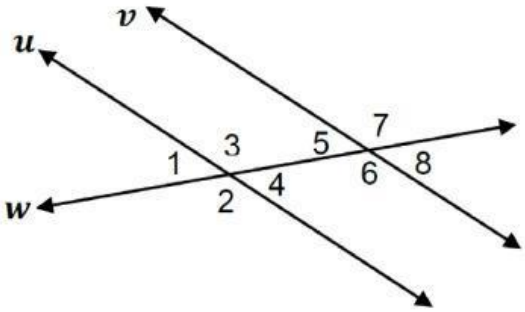


Figure 1

For items 19–23, refer to the figure below.

Given: $u \| v$ and w is a transversal line.

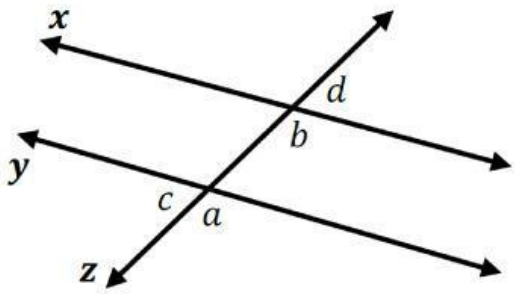


19. Which of the following could be the reason to prove that $\angle 1 \cong \angle 4$?
    A. Vertical angles are congruent.
    B. Corresponding angles are congruent.
    C. Supplementary angles are congruent.
    D. Alternate interior angles are congruent.
20. Which of the following could be the reason to prove that $\angle 2 \cong \angle 7$?
    A. Vertical angles are congruent.
    B. Corresponding angles are congruent.
    C. Alternate exterior angles are congruent.
    D. Alternate interior angles are congruent.
21. Which of the following statements is justified by the reason, "same side interior angles are supplementary?"
    A. $m\angle 4 + m\angle 7 = 180°$ C. $m\angle 4 + m\angle 6 = 180°$
    B. $m\angle 5 + m\angle 8 = 180°$ D. $m\angle 2 + m\angle 7 = 180°$
22. What would be the reason to prove that $\angle 3 \cong \angle 7$?
    A. Vertical angles are congruent.
    A. Corresponding angles are congruent.
    B. Alternate interior angles are congruent.
    C. Alternate exterior angles are congruent.

LIVEWORKSHEETS

23. In a two-column proof, "vertical angles are congruent" is written under the reason column. Which of the following is appropriate to write under the statement column?
A. $\angle 5 \cong \angle 8$ B. $\angle 4 \cong \angle 3$ C. $\angle 1 \cong \angle 8$ D. $\angle 3 \cong \angle 6$

For items 24 – 25, refer to the figure below.
Given: $x \parallel y$ and z is a transversal line.



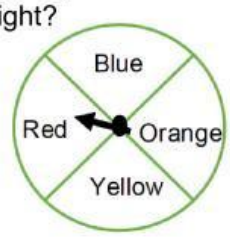
24. If $m\angle a=99^\circ$, what is the measure of $\angle d$?
A. 45° B. 81° C. 90° D. 99°
25. Rona was asked by her teacher to find the value of y given that $m\angle a=6y$ and $m\angle c=13y-10°$. She wrote her computation in this way: Did she arrive at the correct answer?

$$(6y) + (13y-10^\circ) = 180^\circ$$
$$19y-10^\circ+10^\circ = 180^\circ+10^\circ$$
$$19y=190^\circ$$
$$y=10^\circ$$

A. Yes. Common variables must be combined.
B. No. The equation must be $(6y) = (13y-10)$.
C. No. Multiplying both sides of the equation by 1/19 is not equal to y=10.
D. Yes. The equation she formulated is correct since $\angle a$ and $\angle c$ are supplementary angles.

For items 26 - 27, refer to the characteristics below.
I. Lines are coplanar.
II. Lines are non-coplanar.
III. Lines do not intersect.
IV. Lines intersect and form right angles.

26. Which of the following statements above is/are **NOT** true about two parallel lines?
A. I only B. I and III only C. III only D. II and IV only
27. Which is/are true about perpendicular lines?
A. II only B. II and IV only C. I and IV only D. II and III only
28. How many faces does a cube have?
A. 3 B. 4 C. 5 D. 6
29. Which is referred to as an activity involving chance that can have different results?
A. Event B. Experiment C. Sample Point D. Sample Space
30. How many possible outcomes are there when you spin the spinner shown at the right?
A. 1 B. 2 C. 3 D. 4



31. What do you call the set of all possible outcomes of an experiment?
A. Event B. Experiment C. Sample Point D. Sample Space
32. How many aces are there in a standard deck of 52 playing cards?
A. 4 B. 6 C. 10 D. 13
33. Which is referred to as the results of an experiment?
A. Events B. Outcomes C. Sample Points D. Sample Spaces

LIVEWORKSHEETS

34. In the word **EXPERIMENT**, how many vowel letter/s is/are there?
A. 1 B. 2 C. 3 D. 4

35. Which is referred to as the set of some outcomes of an experiment?
A. Event B. Outcomes C. Sample Point D. Sample Space

36. Suppose you toss a coin once; how many possible outcomes are there?
A. 1 B. 2 C. 3 D. 4

37. Ana flipped a coin once. Which set contains the possible outcomes?
A. $S=\{H,T\}$
B. $S=\{(H,H),(T,T)\}$
C. $S=\{(H,H),(H,T),(T,H)\}$
D. $S=\{(H,H),(H,T),(T,H),(T,T)\}$

38. Which of the following is **NOT** an experiment?
A. rolling a die twice
B. drawing a card from a deck of cards
C. a queen of hearts
D. flipping a coin thrice

39. Which is the sample space when you roll a die once?
A. $S=\{4\}$ B. $S=\{2,4,6\}$ C. $S=\{1,2,3,5,6\}$ D. $S=\{1,2,3,4,5,6\}$

40. If you roll two dice once, how many possible outcomes are there?
A. 8 B. 16 C. 26 D. 36

41. Arlene got coins from her pocket which accidentally rolled on the floor. If there were 4 possible outcomes, how many coins fell on the floor?
A. 1 B. 2 C. 3 D. 4

42. Which of the following statements is **true**?
A. Rolling a die once has 7 possible outcomes.
B. Tossing two fair coins once has 6 possible outcomes.
C. In a True or False test, there are four possible answers.
D. In a standard deck of 52 playing cards, there is one Jack of spade.

43. When you roll a die thrice, how many possible outcomes are there?
A. 100 B. 156 C. 200 D. 216

44. How many possible outcomes are there in tossing three coins simultaneously?
A. 4 B. 8 C. 12 D. 16

45. In playing a snake and ladder game, you hope to get a number 5 in rolling a die once to win a game. Which of the following describes the phrase "get a number 5"?
A. Event B. Experiment C. Sample Point D. Sample Space

46. In a bag, there are 3 white balls, 2 brown balls and 4 gray balls. How many possible outcomes when one ball is chosen randomly from the bag?
A. 3 B. 5 C. 7 D. 9

47. The set of possible outcomes of getting composite number from the counting numbers 5 to 10 is S = {6,8,9,10}. Which of the following terms describes this set of outcomes?
A. Event B. Experiment C. Sample Point D. Sample Space

48. How many possible outcomes are there for the experiment choosing a rock, or a paper, or a pair of scissors at random?
A. 3 B. 4 C. 5 D. 6

49. When a card is drawn from the standard deck of 52 playing cards, how many possible outcomes of getting a numbered card?
A. 9 B. 18 C. 27 D. 36

50. From the counting numbers 1 to 30, in how many ways can you choose a number which is a multiple of three?
A. 5 B. 10 C. 12 D. 15

"God did not say it will be easy, but He did say it will be worth it."
#NeverGiveUp
#jmsp#

LIVEWORKSHEETS