Republic of the Philippines

Department of Education

National Capital Region

**DIVISION OF QUEZON CITY SCHOOLS**

Quezon City, Metro Manila



**SECOND PERIODICAL TEST**

**MATHEMATICS III**

SY 2012 – 2013

DIRECTIONS: Choose the letter which corresponds to your answer from the choices below each question, and write the letter on your answer sheet. DO NOT write anything on the paper.

1. If ∠1 is a right angle and m∠2 = m∠1, find the measure of ∠2.
2. 36° B. 30° C. 24° D. 12°
3. If E is the midpoint of AC and AC = 21, how long is AE?
4. 14 B. 11.5 C. 11 D. 10.5
5. If X is between Y and Z, which of the following is true?
6. XY + YZ = YZ B. XZ + YZ = XY C. XY + YZ = XZ D. ZX + ZY = YX
7. Which of the following cannot be measures of the side of a triangle?
8. 13, 13, 11 B. 5, 16, 11 C. 19, 18, 17 D. 5, 12, 13
9. The lengths of the two sides of an isosceles triangle are 25 cm and 15 cm. What is

the possible perimeter of the triangle ?

A. 65 cm or 55 cm B. 55 cm or 45 cm C. 45cm or 35 cm D. 35 cm or 25 cm

1. Which of the following statements is true?
2. All equilateral triangles are isosceles. C. All right triangles are isosceles.
3. All isosceles triangle are equilateral. D. All isosceles triangle are right.
4. If the sides of a triangle measure 3, 11 and X respectively, find X.
5. 8 < X < 14 B. 8 > X > 14 C. 8 ≤ X ≤ 14 D. 8 ≥ X ≥ 14
6. In ΔABC, ∠C is the largest angle, which side is the shortest?
7. AB B. BC C. AC D. cannot be determined
8. The statement “If m∠1 = m∠2 and m∠2 = m∠3, then m∠1 = m∠3” represents what property?
9. Symmetric Property C. Transitive Property
10. Reflexive Property D. Associative Property
11. In ΔABC, an exterior angle at  A measures 170°, and ∠*B* = 80°.  Which is the

longest side of the triangle ?

A. AB B. BC C. AC D. cannot be determined

11. ΔCAT and ΔDOG are congruent. Which segment is congruent to GO ?

A. TA B. AC C. CT D. DO

1. ΔRST ≅ Δ CDE , m∠D = m∠S = m∠R = 57°, Find m∠E.

A. 58° B. 112° C. 66° D. 136°

1. In ΔMAN, MA = 10 cm, MN = 8 cm and AN = 13 cm. If ΔMAN ≅ ΔDOP, then what is the smallest angle of ΔDOP.
2. ∠D B. ∠O C. ∠P D. cannot be determined
3. If T H I N K ↔ P O W E R, then T↔P, HI ↔ OW, and TIK ↔ \_\_\_\_\_\_.

C

1. P O R B. P W R c. P E R D. W E R

1. The W-truss at the right is the most widely used of the light wood trusses.

D

Identify the triangle congruent to ΔBGC.

B

1. ΔDEF B. ΔDFC c. ΔCGF D. ΔABC

E

F

A

G

1. If ΔFLE is isosceles and ME ≅ AL, which of the following

F

can be used to prove ΔFEM ≅ FLA ?

A. SAS Postulate C. AAS Postulate

B. ASA Postulate D. SSS Postulate

L

A

M

E

17. In parallelogram ABCD, AB is parallel to \_\_\_\_\_\_ .

A. AD B. AC C. DC D. BC

M A

18. If MAZE is a parallelogram, what is the value of y? 75°

A. 75° B. 15° C. 115° D. 175° y

C

E Z

19. Which test for congruence proves that ΔACM ≅ ΔBCM if CM is the median to AB ?

1. SAS B. ASA C. SSS D. SAA

A M B

20. State the additional information needed to prove that ΔHPY ≅ ΔJOY by HyL Theorem

if HJ bisects PO. H

A. HO ≅ JO B. HY ≅ JY C. PY ≅ OY D. ∠G ≅ ∠J

P Y O

21. ∠AOB and ∠BOC form a linear pair. If ∠AOB = x°, what is ∠BOC ?

A. x° B. y° C. (180 – x)° D. (90 – x)° J

L O

22. Given ΔMHL ≅ ΔAKO, if m∠M = x and m∠L = 4x – 30 then what is m∠A ?

A. 24° B. 30° C. 36° D. 42°

H M K A

23. Find the measure of ∠x. x

A. 36° B. 49° C. 54° D. 90° 54°

24. If the diagonals of a quadrilateral intersect, then it is

A. concave B. convex C. concurrent D. congruent

25. The three angles of a quadrilateral measures 72°, 81° and 93°, what is the measure of the fourth angle?

A. 104° B. 114° C. 204° D. 214°

26. Which is not a property of a parallelogram.

A. Diagonals bisect each other. C. Opposite angles are supplementary

B. Opposite sides are parallel. D. Diagonal separates a parallelogram into 2 ≅ Δs.

27. GAME is a parallelogram. If ∠G = x + 40, ∠E = 3x – 12. What is m∠G ?

A. 38° B. 68° C. 78° D. 90°

28. Ana has a piece of rope with exactly 7 knots tied at equal intervals. Using the rope,

she wants to make triangles so that each vertex of the triangle occurs at a knot.

How many different triangles can Ana make ?

A. 1 B. 2 C. 3 D. 4

29. The \_\_\_\_\_\_\_\_\_\_ segment from a point to a line or plane is the shortest segment from the

point to a line or plane.

A. consecutive B. parallel C. perpendicular D. opposite

A B

30. Find the value of x to make (6x – 15)°

quadrilateral ABCD a parallelogram

A. 6 C. 12

B. 18 D. 24 (4x + 9)°

D C

31. If two parallel lines are cut by a transversal, which type of angles are not congruent?

A. alternate interior angles C. corresponding angles

B. Alternate exterior angle D. interior angle on the same side of the transversal

32. Two vertical angles are supplementary. Find the measure of the two angles.

A. 60° and 120° B. 90° and 90° C. 100° and 80° D. 45° and 135°

33. A square is folded to form two congruent right triangles. What type of triangles are they?

A. acute Δ B. scalene Δ C. isosceles right Δ D. scalene right Δ

I N

34. In isosceles trapezoid KIND, ∠K = 105°, what is ∠I ?

A. 105° B. 100° C. 85° D. 75°

K D

U K

35. For what value of y will LUKY be a parallelogram? 3y-2

A. 100 B. 150 C. 180 D. 210

5y+38

L Y

t

For numbers 36 – 40. 1 2 m

In the figure, m ⏐⏐n, with t as transversal. 3 4

36. Which of the following pairs of angles are alternate interior angles? 5 6 n

A. ∠1 and ∠8 B. ∠4 and ∠5 C. ∠2 and ∠6 D. ∠1 and ∠7 7 8

37. If m∠1 = 52°, what is the measure of ∠7 ?

A. 52° B. 40° C. 128° D. 150°

38. Which of the following statements is not true.

A. ∠4 and ∠5 are congruent. C. ∠2 and ∠7 are congruent.

B. ∠3 and ∠8 are supplementary. D. ∠2 and ∠6 are supplementary.

39. If ∠6 = (6x + 5)° and ∠3 = (9x – 55)°, What is x?

A. 20 B. 25 C. 30 D. 35

40. Using the given in number 39, what is the measure of ∠2 ?

A. 100°` B. 110° C. 120° D. 125°

Figure for Nos. 41 – 45. G

A B

L V

41. In ΔGLV, A and B are on GL and GV, respectively such that AB⏐⏐LV.Which of the following is/are TRUE? i. ∠GAB ≅∠GLV ii. ∠GBA ≅ ∠GAB iii. ∠GBA ≅ ∠GVL

A. i only B. i and ii C. i and iii D. i, ii and iii

42. In the figure: GA = x + 3 , GL = 15, Find AL.

A. 12 B. x + 12 C. 12 – x D. x – 12

43. Using the given in number 42. If ∠GAB = 72°, what is ∠GLV ?

A. 72° B. 108° C. 18° D. 48°

44. In the same figure, GA = x - 2, GB = x + 2, AL = x, and BV = 2x.

What value/s of x will make triangle GLV exist?

1. 6 B. 0 C. both o and 6 D. none of these

45. In nos. 44: If triangle GLV exists, what is the length of GV?

A. 8 B. 12 C. 16 D. 20

46. The diagonal of a square measures 12 cm. What is the length of its sides?

A. 6 B. C. D.

47 In parallelogram ABCD, ∠A = (2x + 15)° , ∠B = (3x – 5)°. Find ∠C.

A. 83° B. 97° C. 166° D. 194°

48. ABCD is a rectangle. The diagonals meet at E. If ∠EAB = 68°, find ∠ABE.

A. 22° B. 68° C. 112° D. 168°

49. In quadrilateral ABCD, m∠A = 2x, m∠B = 2x + 5, m∠C = 3x – 9 and m∠D = 5x – 8. Find m∠A.

A. 62 B. 67 C. 84 D. 147

50. In parallelogram ABCD, ∠A = (2x + 15)° , ∠B = (3x – 5)°. Find ∠C.

A. 83° B. 97° C. 166° D. 194°

* GOOD LUCK -

*/tvillaluna*